

SERVICE INDUSTRIES AND SERVICE ECONOMY

Anita Kon*

Summary - The study analyses the role of services in modern and less-developed economies. It shows the different meanings of the value, definition and classification of service activities found in economic literature. It discusses the relation between service production growth and economic development observing the role of these activities in the dynamics of economic restructuring. Further, it also examines the differences between private and public sector service restructuring and the consequences of internationalization of services. It concludes that economic restructuring also caused by changes in the nature of goods and services has important regional effects.

Introduction

As stressed by Feketekuty (Nusbaumer 1987: Preface), "Service activities are at the heart of a major economic revolution taking place all around us. This new economic revolution is equivalent to the Industrial Revolution in the eighteenth century, the rise of guilds in the Middle Ages, and the shift from a hunter/gatherer economy to an agricultural/pastoral economy at the dawn of recorded history when organized agriculture first led to the development of towns and the invention of writing." The new tools in this recent revolution are computers, robots and completely automated factories, which are fastly reducing the need for physical labor in production. On the other side, physical labor is also reduced by machinery, fertilizers, pesticides and biogenetics engineering in agriculture. The results of these factors is the fact that more people will make their living by working in services.

Despite the fact that most developed countries have economies that are service oriented, little attention has been given to the role that services are playing in growth and change. Services are often considered to include everything except primary and manufacturing activities. As suggested by Riddle(1986:1)," service sector is one of the least understood portions of our global economy" in spite of the fact that "no economy can survive without a service sector".

The place of services in the world economy today is to facilitate all economic transactions, not only by providing essential inputs to manufacturing, but also allowing forward and backward linkages to the development of growth poles, that is: "services are the glue that holds any economy together, the industries that facilitate all economic transactions, and the driving force that stimulates the production of goods"(Riddle, 1986:26).

More recently in the 1980s, we could observe a growing interest in service activities in the developed countries of Europe, mainly because services have been the main source of job

* The author gratefully acknowledges Professor Werner Baer, the Department of Economics at University of Illinois at Urbana-Champaign, Professor Joseph L. Love, Director of the Center for Latin American and Caribbean Studies-UIUC, and CAPES/Brasil, for the support received as a Visitor Scholar at UIUC.

creation since the oil crises of 1973 (OECD, 1984; Noyelle and Stanback, 1984; Noyelle, 1986; Bannon, 1987; Baily and Millet, 1986), but there has been little substantial research into the dynamics of service location. Services industries have been receiving closer attention lately because the observation that to compete in world markets, countries have to acquire those activities in a cheap, quick and efficient way.

The new economic revolution of services is also transforming the organization of the international economy. It has allowed production to become more international. A computer, for instance, contains parts manufactured in many countries and works through services generated in other several countries. The globally produced goods compete in global markets and the internationalization of manufacturing is both due and matched to the equivalent internationalization of services. Thus, the internationalization of economic activity is based on growing trade in so-called business services, which are, among others, mainly knowledge-intensive and information-intensive services. In the past, economists have defined services as non tradeable, but in recent days they are trying to probe trade in services.

Thus, this study examines theoretical and empirical aspects about the role of service activities in the recent restructuring world economies, as much in developed as in developing countries. To understand this role the text begins with the discussion of the notion of the value of services in the economic context and with the many different approaches about the definition and classification of services, to show the transformation in those concepts according to world changes in economic systems due to changes in technological and productive processes.

In sequence, it observes the determinants of service activities growth and the impacts over the economies, which can show diverse ways of restructuring according with the level of development of each country. In the last part, it is discussed service sector restructuring in the different public and private contexts; it is also observed the process of internationalization of services as fundamental to global productive restructuring, and the regional aspects of these transformations.

The value of services

In the first economic literature (from the phisocrats and the classics) we find evidence of the creation and accumulation of wealth in tangible forms, and this was the only way in which utility could be transmitted from one period to another (Kon 1992, Chapter 1). In the past, production of tangible goods were considered as opposed to that of intangible sources of well-being (or utility), in the short and long run. More recently, the utility contained in some services, mostly in the form of ideas and their practical implementation can be stored and accumulated in goods, magnetic tapes, text processed diskettes, videotapes, cinematographic films, etc. This

utility has been used as a source of market value. Therefore, in modern economies, all productive activities play a similar economic role, that is to say we cannot consider some activities as basic and others as residual (Kon 1992). Nevertheless, a distinction is still made between those activities which produce utility in tangible forms and those which produce intangible utility, which are called services (Nusbaumer 1987).

In this way, all products, tangible and intangible, can be incorporated in simple demand functions related to the wants and desires of final users, since utility is the final goal of all productive activity. If economic theory considers that utility becomes value when it is exchanged in the market place among different producers and owners of it, and disutility (the converse of well-being) becomes cost, in analyzing services it is necessary to identify those elements which are the main determinants of their market value. In Ricardian terms value of services can be broken down in three main constituent elements: labor, human capital (knowledge) and physical capital. The various proportions in which those three elements are incorporated in a service, determine the value of the service in the market. Some services are by nature human capital-intensive, others physical capital-intensive and yet others labor-intensive. However services tend to employ a large amount of labor (Nusbaumer 1987). But the nature of knowledge makes more difficult to reconcile traditional trade theory with the theory of the exchange of services.

The particular features of services production brings the difficulty of measuring the actual volume of services rendered. If the differences in quality of services are interpreted as quantum differences, it is unclear how much utility a particular service can create over time. In the case of goods, they produce utility at a given point of time, which can last for over a very short period (nondurable goods) or during an extend period (durable). However services being intangible and invisible, it is often assumed that they produce only short-run or immediately utility, and that much of their diffused environmental effects are not clearly measured but recognizable by individuals, social groups and the economy as a whole. They are "public goods", "social overhead", "externalities", "unrequired output", etc. For example, if some services perform communication and information functions, they establish linkages between goods and people which provide external economies to the actions of individuals and groups of individuals in their social environment. Much of this effects goes unrecorded in money terms, even in perfectly competitive and fully monetized economies. Thus, there is a indefinite amount of unrecorded value in existing data on gross national product which, together with the failure to measure various inputs in human capital, explain the apparent low productivity of labor services in modern economies (Nusbaumer 1987).

Thus, the question of value of services face the constraint imposed by the nonexistence of market prices for many services and by the fact that many services create utility in the form of externalities, that is, not in the form of value as traditionally defined. The quality of services vary

with the human capital and personality of the service provider, and many times they cannot be standardized and comparable and therefore earn the same price in a competitive market. Thus, one extra unit of service will not create one extra unit of utility comparable to the previous unit, giving rise to a discrete utility curve, breaking down the analysis of services on the basis of marginal utility in consumption and other demand analysis which assume equal increment of utility over a given income scale.

The creation of externalities by services lead to the analysis of the intrinsic contribution they make to the process of economic development, relating services to wealth creation in the broadest sense as to their real role in accumulation and distribution, irrespective of fluctuations in their price according to the market. As stressed by Nusbaumer, the value of services is made up of the *value of the factors* (including knowledge) use to produce them as well as of the *utility of the functions* (whether or not valued at market prices, i.e, considered as service products or external economies) they perform in different economic systems and social environments.

The factors that enter into production of services are either tangible or intangible. Physical capital and unskilled labor are tangible units, and their availability in a given market can be measured with relative precision and subjected to traditional supply/demand analysis. However human capital it is not so easily measured even if education and training curricula are traditionally broke down into recognizable portions corresponding to general levels of skills (Becker and Mincer 1962). Such breakdown and the content of the resulting portions vary from one society to another and over time within the same society. Different degrees of education and specialist training at technical or professional level command different factor prices in the market. Beside this, there are some monopoly elements in knowledge and information which are due to their very specialized nature or to institutional factors such as the use of patented technology or the corporatist exploitation of information by some professionals, as doctors, lawyers, and other (Nusbaumer 1987:18). Those differences among countries are remarkable and it has been remarked that the economies of many developing countries have difficulty in "taking off" because of illiteracy and lack of technical skills.

On the other side, the utility of the functions that services perform in the economy can be transferred either to other service products or to tangible wealth. Service functions can be intermediate if they serve to enhance the supply of wealth by others producers of goods or services. They can be final if they assist consumers in acquiring utility from the goods or services they purchase. However services functions are by essence complementary to other outputs because the utility they transfer to these outputs cannot exist without them whereas service products can be either complementary to or substitutes for other goods or services.

In a general way, the value of services can be considered according to the generated product of the service in question or to the possibility of adding value to the product of other

economic activities. Thus, for the same kind of service, diverse economic contexts can add different values to the global generated product.

Definition and classification of services

The question of definition and classification of services, is a necessary precondition for an analysis of their contribution to economic growth. But its a problematic matter. Stigler argued in the 1950s that there was no consensus, among the researchers, on either the boundary or the classification of services. In the following decades Fuchs in the end of the 1960s and Marshall in the 1980s and in the beginning of the 1990s, wrote that the passage of time only reinforce this conclusion (Stigler, 1956; Fuchs, 1968; Marshall, 1988; Marshall and Wood, 1995).

Marshall reinforces that in the 1990s, the debate over the technical issues of definition and classification distinguishes among the "conventional" and the "alternative" approaches to service growth and location. The conventional approach accept that the service sector is a distinctive group of activities whose growth represents a significant change in the nature of modern economy. On the other side, alternative view emphasizes that still remains an interdependence between some services and their past industrial trends, and besides the important changes in the nature of work, they are still driven by the same goals of capitalistic production, that is to seek new sources of profit through investment in manufacturing technology.

As stressed by Riddle (1986:3), if "industrialization" usually refers to manufacturing operations, implying that these are the only large-scale, mechanized productive activities, we can notice the fact that services are also industries and that the Industrial Revolution involved changes not only in production methods but also in financial structures and transportation and communication networks available for distribution of goods. The most conventional labels for the service sector are "tertiary", "residual", and "post-industrial".

The term "tertiary" was coined by Fisher in 1935 (Kon 1992), as parallel in construction to the terms "primary" and "secondary" then in use in Australia and New Zealand to refer, respectively, to the agricultural/pastoral and manufacturing sector. In people's minds services were positioned by fisher as economic activities of lesser importance or third in importance (Riddle:1986). Nevertheless he wanted to point out that there was, a third group of economic activities in addition to the two traditionally analyzed by economists. but Riddle gives another connotation to service activities: while extractive activities (agriculture, fishing, hunting, forestry mining and quarrying) are essential to physical survival, service activities are essential to social well-being. In this case, she argues that once one shifts from individual survival to economic interdependence, service industries form a primary sector, extractive the secondary sector and manufacturing the tertiary sector.

The concept of "residual" was adopted when Clark in 1940 wrote that there remains an important residual which we may describe for convenience as 'services industries', giving the same meaning as Fisher, that is, trying to point out that there were economic activities other than agriculture and manufacturing. His terminology persisted in macroeconomics as the most usual description of services and the way of measuring the product of these activities, as the residual after agriculture, mining and manufacturing (Kon 1992:Chapter 1). But if a residual is usually thought of as that little bit which is left over, in the case of service sector this concept is further from the truth because service sector is most part of developing and developed economies, on the average, the largest of the three economic sector, as we will see further on in Table 1. Clark himself was aware of this from an employment perspective for Australia and New Zealand in 1938, where over 50 percent of their populations was employed in service industries (Fisher 1939:17).

The service sector was referred as the "pos-industrial sector" by Bell in 1973 (Riddle 1986:5) and the post-industrial society was used to refer to one in which the service sector is dominant. This intended to mean that the services industries did not developed until after industrialization or manufacturing development had occurred. Bell based his arguments regarding economic development and changes in sectorial employment rather than on sectorial Gross Domestic Product for the development process of the economies of Western Europe from large agrarian societies to manufacturing-based societies where services become important only later in the present century. Riddle stresses that this terminology is inaccurate because in some countries (Canada and United States) labor moved into manufacturing and services concurrently, and in other (Japan, Singapore, and West Africa, for instance) labor moved into services before manufacturing. Besides this, Bell's terminology implies that services are not themselves industries and that service sector vitality and growth are dependent, in a causal sense, on the dynamism of the manufacturing sector. This is not true for all countries and many examples are found where service industries were quite important in some societies, before the industrial development (England, Netherlands and Portugal, for example). More than this, the massive manufacturing development was only possible because of transformations that occurred in some service industries as capital markets, transportation and communication. As explained by Riddle: "Of primary importance were the changes created by using the products of manufacturing, rather than the manufacturing process itself."

Furthermore, it is noticed that the traditional language of defining manufacturing and services is becoming obsolete, because economies are a tangle of diverse activities, each of which involves different combinations of 'production-type' and 'service-type' work, and yield several combinations of material and informational components in the products or services. As stressed by Castells " there is not a service sector"; rather there is a set of activities that have

increased in diversity or specialization as society has evolved, and services (especially social and personal) are a way of absorbing the surplus population generated by increased productivity in agriculture and industry (Castells, 1989:130). Besides this, services activities connect agriculture and manufacturing with the consumption of goods and services, and with the management of organizations and institutions of society.

Hill (1977:318) defines services as constituting a "change in the condition of an economic unit, which results from the activity of another economic unit, which is brought about as the result of the activity of some other economic unit, with the prior agreement of the former person or economic unit". Riddle agrees with Hill and gives some examples of what she considers inadequate definitions of services (apud Riddle 1986:9):

"Service industry. an industry that produces services rather than goods. The chief service industries are transportations; retail trade; insurance;...." (Ammer and Ammer 1984).

"(Services are)...consumer or product goods which are mainly intangible and often consume at the same time as they are produced... Service industries are usually labour-intensive" (Bannock, Baxter and Rees 1972).

"Services. The component of the gross national product that measures the output of intangible items" (Greenwald 1987).

"(Services)... are sometimes referred to as intangible goods; one of their characteristics being that in general they are 'consume' at the point of production" (Pearce 1981).

Riddle considers those definitions inadequate because the features attributed to services industries as tangibility, labor intensity, simultaneity of production and consumption and perishability, are in fact relevant to all economic activities (except intangibility). On the other side, some services can be semi-durable (maintenance, professional services) or durable (research, education, government) and not perishable. Thus, for this author, the key elements in defining services are (1) the natures of production output (clarified in Hill's above definition); (2) the unique inputs used (three types of producer-customer relationship as the production input); and (3) the purpose served by the production process (provision of time, place and form utility). From this definitional strategy services are defined as "...economic activities that provide time, place and form utility which bring about a change in or for the recipient. Services are produced by (1) the producer acting for the recipient; (2) the recipient providing part of the labor; and/or (3) the recipient and the producer creating the service in interaction". (Riddle 1986:12).

In what refers to the classification of services Riddle presents summary of alternate classification systems as described below.

Production-based Classification

Fisher-Clark (1935/1940)

- . Primary (agriculture, mining)

- . Secondary (manufacturing)
- . Tertiary (residual)

Sabolo (1975)

- . Primary (agriculture, stock raising, fisheries)
- . Non-primary
- . High use of capital and skills (transport, mining, manufacturing)
- . Low use of capital and skills (trade).
- . High use of skills, low use of capital (finance).

Fuchs (1968)

- . Agriculture
- . Industry (mining, manufacturing, transportation, utilities)
- . Services (commerce, business government).

Consumption-based Classification [service portion]

Singer (1981)

- . Production services
- . Collective consumption
- . Individual consumption

Function-based Classification [service portion]

Foote and Hatt (1953)

- . Tertiary (restaurants, hotels, repair and maintenance, laundry)
- . Quaternary (transportation, communication, commerce, finance)
- . Quinary (health, education recreation).

Katouzian (1970)

- . Complementary services (finance, transportation, commerce)
- . New services (health, education, entertainment)
- . Old services (domestic).

Browning and Singleman (1975)

- . Distributive services (transportation, communication, commerce)
- . Producer services (finance, professional)
- . social services (health, education, defense)
- . Personal services (domestic, hotels, restaurant, leisure)

U.S. Census Bureau (U.S. department of commerce, 1984)

- . Transportation, communication, utilities
- . Wholesale and retail trade
- . Finance, insurance and real state
- . Services (personal and business).

The most well-known and used classifications from the above mentioned are the Fisher-Clark and the Fuchs systems. Most part of data are found according to the first classification, because most economic data are not reported in a sufficient disaggregated manner to allow for more detailed subdivision. The other system is used by the World Bank in its annual World Development Report and the difference from the first one is due to the mining, construction and

utilities (public services of gas, electricity and water provision) sectors, which are classified as "Industry", reflecting capital-intensive production methods. Although Singer's classification was proposed in studying Brazil by focus on type of consumption rather on method of production, this typology will not be used in this study in what refers to this country, because of the difficulty in the availability of data.

The importance of defining and classifying services is not distinguish them from goods, but to see what economic functions they perform which may or may not be similar to the economic functions performed by goods (Nusbaumer 1987:40). Nusbaumer stresses that there are basically two ways in which a classification of services can be attempted: they can be classified according to the various types of functions they perform in the economy (financial function, trade function, transport function, etc.) or they can be classified according to the various types of specialized knowledge that enter into their production (law, economics, medicine, etc.). He also considers another possibility of classifying services by the type of utility they provide (personal comfort, safety, movement, etc), but this third classification refers to a subset of the functional one, that is those elements are a subcategory of consumption function.

Some other classifications consider their degree of processing, just like goods are ranked in the United Nations Standard Trade Classification (SITC), irrespective of their particular functions or of the specialized knowledge they contain. In this sense, some services that contain a greater amount of knowledge or are more specialized would be considered as being more highly processed than services that can be easily performed by economic agents with a comparative low level of skills. The factors used in their production (including human capital) determine the particular rank they occupy in the classification by degree of processing, and the particular use of services would be irrelevant (Riddle 1986).

In what refers to the degree of processing approach, the services can be categorized according to the role they play in production process, with the distinction between primary, intermediate and final products. Primary services are those that perform elementary linkages functions without reference to the scope of the activity they perform. All unskilled labor services fall into this category, that is they are synonymous with unskilled primary labor in any type of occupation, and can be easily shifted from one type of occupation to another. Intermediate services, are services products made up of the three elementary production factors entering into the making of such products, namely human capital, labor and physical capital. They are often complex activities involving the collection and application of data and their elementary organization and structuring into what is known as information, and are the raw material of final service products. These final products involve a more or less elaborate degree of processing or manipulation of information designed to adapt the raw database to the requirements of specific functions performed by the service providers. The difference between services and goods

regarding to classification of primary production is the physical nature of goods which permits to identify linear processes of production based of physical characteristics of the starting materials, whereas in the case of services there are no physical characteristics on which to base the definition of linear production processes; the only way to define a primary service product is in terms of knowledge-contents of the act which gives rise to the product.

Nusbaumer (1987) attempted a classification of services by degree of processing of knowledge-content, in ascending order as it follows:

1. Babysitters; furniture removers.
2. Street and house cleaners.
3. Portes, guards.
4. Delivery, including mail, service operators.
5. Launderers, maids, chauffeurs, including small-scale transport operators.
6. Janitors; receptionists.
7. Private household employees, general purpose.
8. Escort service employees.
9. Cooks, gardeners, nurses.
10. Barbers, hairdressers, manicures.
11. Dry cleaning, dying and pressing service operators.
12. Waiters, sales attendants; general office staff.
14. Tourist guides.
15. Sport instructors; firemen; policemen.
16. Small-scale retailers and consumer equipment renters; caterers' restaurant/hotel operators; franchisees.
17. Telephone and telegraph operators.
18. Radio communication technical operators.
19. Typist, stenographers; bank tellers; customs officers' rank, military personnel.
20. Commission agents; auctioneers.
21. Office secretaries.
22. Storage and warehouse managers; wholesale, chain-store and supermarket operators.
23. Travel agents; tourist agency operators; shippers and forwarders.
24. Dealers and jobbers, goods and financial assets; exchange dealers.
25. Merchants, brokers; security brokers, real state agents.
26. Land surveyors.
27. Computer operators and programmers; draftsmen; natural resource prospectors.
28. Flight controllers; flight navigators; ship pilots.
29. Insurance, bill collectors; adjustors.
30. Advertisers, copywriters; journalists; public relations specialists.
31. Security analysts; marketing specialists; actuaries, valuers, asseors.
32. Insurance appraisers.
33. Skippers, aerial photographers, railway switching operators, printers.
34. Interpreters; translators; bookkeepers; statistical clerks.
35. Elementary school teachers; welfare workers; community service workers.
36. Accountants; auditors; notaries; patent attorneys.
37. Secondary school teachers; technical school instructors; detectives priests.
38. Industrial designers; chartists.
39. Laboratory assistants; landscape architects; stylist; librarians.
40. Fashion designers; ballet teachers; film producers.
41. Military officers; university instructors; medical assistants; ship captains.
42. Solicitors; orchestra musicians.

43. Chartered accountants; administrators; managers; museum curators.
44. Engineers; university professors; lawyers; doctors; financial counselors.
45. Scientific researchers.
46. Composers, painters, sculptors.

A different way to define a service based on the utility that it provides or their value for users, consider some basic features of service outputs are that they: a) are ephemeral, lasting only for the period of any service transaction; b) are intangible or immaterial in nature; and c) cannot be stored, owned or exchanged (Marshall and Wood, 1995:29). The formal characteristics of services thus derive essentially from its interaction between buyer and seller which is critical to service provision. This provision most part of the times cannot be embodied in material form, although they may sometimes be associated with material exchange. Sometimes the buyer and seller have to be together to the production of the service (as in a dental treatment, for example) and this interaction is critical to the quality of the service. Another characteristic of many services is their tendency towards labor-intensity and the quality of the production depends on training, skills and experience of the staff. But even in many capital-intensive activities such as transport, distribution and financial services, the quality of expertise they offer is critical to their competitiveness.

Miles (1993) refers to services as "those industries which effect transformations in the state of material goods, people themselves, or symbolic (information)" and offers the following classification of the special features typically attribute to services.

Service Production

- Technology, plant and labour : low levels of capital equipment; heavy investment in buildings. Some services highly professional (especially requiring interpersonal skills); others relatively unskilled, often involving casual or part-time labor. Specialist knowledge may be important, but rarely technological skills.
- Organization of labor process: workforce often engaged in craft-like production with limited management control of details of work.
- Features of production: production of often non-continuous and economies of scale are limited.
- Organization of production: Some services state-run public services; others often small-scale with high preponderance of family firms and self-employed.

Service product

- Nature of product: non-material, often information-intensive. Hard to store or transport. Process and product hard to distinguish.
- Features of product: often customized to consumer requirements.

Service consumption

- Delivery of product: production and consumption co-terminous in time and space; often client or supplier has to move to meet the other party.

- Role of consumer: services are 'consumer-intensive', requiring inputs from consumer into design/production processes.
- Organization of consumption: often hard to separate production from consumption. Self-service in formal and informal economies commonplace.

Service markets

- Organization of markets: some services delivered via public sector bureaucratic provision. Some costs are invisibly bundled with goods (e.g. retail sector).
- Regulation and marketing: professional regulation common in some services. Difficult to demonstrate products in advance.

Many categories of services classification intend to represent their diversity and links with other activities. The most obvious distinction is between public and private provision. As to the private services, other division have been made on the basis of the types of market served, in order to represent the essential variety of provider-client interaction. The most common is between 'consumer services' and 'producer services'.

Marshall (1988:13) recall the interdependence of the production of goods and services, stressing that some services are provided directly to consumers, but they depend heavily upon manufactured goods and infrastructure for their creation and delivery. Other services, sometimes identical in form, supply "intermediate" input to primary, manufacturing and other services producers, and these inputs may be critical to the success of such activities in the final market-place. These are producers services, concerned with financial, legal and general management, innovation, development, design, administration, personnel, production technology, maintenance, transport, communication, wholesale distribution, advertising and selling, whether in primary, manufacturing or service organizations.

These services, like parts of manufacturing, play a significant role in spatial differentiation because their demand and supply need not be geographically coincident and they are not solely dependent upon the level of economic activity in an area. Because of their role in investment, innovation and technological change they may contribute towards spatial variations in economic development process. Marshall defines producer services base on the SIC (Standard Industrial Classification), as follows:

Information processing services

Product/process, research and development.

Marketing, sales, advertising, market research, photography, media.

Engineering (civil, mechanical, chemical, electrical, etc.) and architectural design.

Computer services, management consultancy, administration.

Financial planning, accountancy, investment management, auditing.

Banking, other loan institutions.

Insurance.

Legal.

Training/education/personnel and industrial relations.
 Purchasing.
 Office services
 Property management/estate agency.

Good-related services

Distribution and storage of goods, wholesalers, waste disposal, transport management.
 Installation, maintenance and repair of equipment, including vehicles, communications networks and the utilities.
 Building and infrastructure maintenance.

Personnel support services

Welfare services.
 Cleaning, catering, security, safety.
 Personal travel and accommodation.

The distinctions among those categories stress the need to locate near markets as a distinguish characteristic among producer services. In this way, goods-handling services are more likely to be closely tied to production industries than information services, for example, and personnel services are likely to locate in relation to the pattern of all other business activities. Some sub-categories of producer services (as described bellow) were distinguished by Marshall, in order to stress the markets served; this classification provides a distinction between producer services which serve markets internal or external to the the firm, and where the organizations supplying external markets are divide in pure or mixed types:

- a) services produced by firms for themselves, that is, internalized supply of services within the firms. The demand for this component is influenced by the product, production technology and organizational characteristics of the firm;
- b) services produced by firms solely to meet demands from other firms, that is 'pure' specialist producer service suppliers. The size of the market will be largely determined by the degree of service internalization by firms. The characteristics of this kind of services itself may influence barriers to entry into the market, and the degree to which production can be carried out by non-specialist producers;
- c) services produced for other firms by firms which meet both intermediate and final service demand. In these mixed service activities the business sector and personal consumer demand will both influence the nature of the market.

The services distinguished in the different categories have experienced different patterns of growth in employment, in recent years, particularly between some static or declining 'physical' services and 'personnel' and information-handling services which are largely growing. The different degrees of variation is due for example to the fact that goods-handling services are generally more capital-intensive than other categories, telecommunications activities bears little relationship to many other manual services, and financial services have a central role in all

business investment, what is different from all other information processing services. Further, within each service there is also a considerable difference among occupational variation (Kon, 1996) and each group experience differing market demands and pressures.

The so-called consumer and producer services as classified by Marshall, are not mutually exclusive groups; some service activities as banking, insurance and finance fulfil both final and intermediate demand. Daniels (1993:4) suggests in this case, the creation of a third group of 'mixed' services or to assign an activity to the consumer or producer group according to which kind or output predominates (using input-output tables).

Another approach defines an 'information sector' stressing the role of many service activities in producing, processing and communicating information, grouping some occupations which play a critical role in the modern economies, that is, the information manipulation (Porat, 1977; Hepworth, 1989). Hepworth presents an inventory of information occupations:

Information producers

Science and technical, e.g. chemist and economists;
Market search and coordination e.g. salesman and buyers; Information gatherers, e.g. surveyors and quality inspectors; Consultative service, e.g. accountants and lawyers;
Health-related consultative services, e.g. doctors and veterinarians.

Information processors

Administrative and managerial, e.g. production managers and senior government officials;
Process control and supervisory, e.g. foreman and office supervisors; Clerical and related, e.g. office clerks and bank tellers.

Information distributors

Educators, e.g. school and university teachers;
Public information disseminators, e.g. librarians and archivists; Communication workers, e.g. newspapers editors and TV directors.

Information infrastructure

Information machine workers, e.g. computer operators and printing pressman;
Postal telecommunications, e.g. postmen and telegraph operators.

But such a classification, in spite of explaining some important features of occupations requires a further explanation about the scale and distribution of this different functions among the various services sectors.

An 'alternative' approach to service classification found in the literature arises from the marxist forms of analysis. In those studies, production is distinguished from circulation functions. In the first case, it is considered the industrial base and its outputs in the form of physical goods and related labour; and in the second case it is considered flows of money, commodities and property rights. Besides this, consumption services support personal and social (public) consumption. As known, the marxist form of classification considers that the services outputs do

not contribute directly to surplus value (profits) or the accumulation of capital because they cannot be stored or owned (Kon, 1992). Further, services are necessary, but are secondary to industrial production, and are seen in a supporting role.

Walker (1985:48) stresses that " The distinction between goods and services lies in the form of labour and its product. A good is a material object produced by human labour... A labour-service, on the other hand, is labor that does not take the intervening form of a material product... It is thus normally irreproducible by other workers and involves a unique transaction between producer and consumer." This author provides a marxist-based classification of services:

Services involved in goods production

Services involved in the production of goods which ultimately have a material output. This includes workers indirectly involved in goods production, i.e. non-production workers in manufacturing industry as well as their business service suppliers, e.g., administration, pre-production activities such as research, design, consultancy, etc. and post-production activities such as repair and maintenance. Examples of this wide-ranging definition of goods production are: legal or consultancy report or scientific research where the output is on paper, cinema, hotels and 'fast food' are also consumption of goods.

Circulation

The transfer of goods, labor, money and information, e.g., finance, transport, communications, telecommunications, wholesale distribution, retail trade and property services.

Labor services

These are complete labor processes which do not produce a physical output. It includes maitressing and various forms of advice where the output is intangible and inoque, e.g. medical, legal or other forms of professional advice; also includes sales staff involved in retail outlets, theater and concert performances, domestic service and teaching.

State functions

Central and local government activities.

Thus, to Walker many services industries are involved in goods production, and such an interpretation of services means that, e.g., computer services, advise and consultancy have a productive value when they gain a material expression, because they must be incorporated in a good: software is provided on a disk and consultancy on a piece of paper or in a report. Also restaurants and other food outlets are considered goods producers (because the product, a meal, is a good), as much as media activities such as television or film production, publishing of newspapers, magazines and books. They are mere labor-intensive forms of production. What this author calls "true" services or "labor services", are those which are complete labor processes supplied directly to consumers; their output is intangible, personal and unique to the user and not normally reproducible. But, this narrower definition of services emphasizes the significance of industrial production for service development, because when business service production are allocated to the goods sector, their growth emerges as social and technical division of labor

surrounding goods production, or as a part of the wider and long-term process of industrial evolution (Sayer, 1992).

Thus, the traditional divisions between manufacturing and services no longer make much sense, because in some high-technology manufacturing sectors research and development work is fundamental, and also are other services like design, styling, marketing and the distribution network. Recently more and more of those services are outsourcing of the industries to the Tertiary sector. But we can still frequently find many manufacturing sectors where the fabrication of goods incorporates growing quantities of services activities, as research and development, legal and financial, services, banking, advertising, marketing, etc.

In this sense, Baily and Maillar (1991:132) propose a new classification of economic activities which analyses production within the context of an interactive supply and demand system in which the individual establishments of a firm are classified according to their functional role. These major functions are manufacturing, circulation, distribution and regulation, and one would be able to separate the employment within individual establishment of a firm into these functions:

1. *Manufacturing* - involving the processing of raw materials.
2. *Circulation* - performing an intermediary role in the physical flow of persons, as well as information, communication and financial flows.
3. *Distribution* - providing goods and services directly to end users.
4. *Regulation* - ensuring the overall smooth operation of the production system; in particular maintenance, modifications, regulation and monitoring.

The functional subdivision in enterprises was distinguished as follows:

1. *Manufacturing*

- 1.1 Use of natural resources: agriculture; horticulture; silviculture; fishing; electricity, water, gas; mining.
- 1.2 Processing of natural resources and manufacturing goods: food products; drinks; tobacco; textiles; clothing, linen; wood, furniture; paper; graphic arts; leather, footwear; chemicals; plastic, rubber; non-metallic mineral products; metallurgy; machine, vehicles; electrical and electronic goods; other manufacturing industries.
- 1.3 Construction and civil engineering: construction; outfitting, finishing.

2. *Circulation*

- 2.1 Physical flows, flows of persons: wholesale trade; brokerage; transportation;
- 2.2 Information and communication flows: information transmission; information processing.
- 2.3 Financial flows: banking; insurance; financial companies.

3. *Distribution*

Health; education; retail trade; hotel and restaurant trade; repair of consumer items/vehicles; personal services; culture, sports, leisure; personal services; domestic services; others.

4. *Regulation*

4.1 Public administrations: confederation; cantons; communes; other public organizations

4.2 Private organizations: social welfare organizations; religious, social, cultural organizations; community services, common interest groups; private road works and sanitation.

4.3 International diplomatic organizations.

As stressed by the authors, in this new classification manufacturing category does not correspond to the traditional primary and secondary sectors, because many activities not involving manufacturing fall within the circulation and distribution categories of the establishment. This proposed typology is not a mere remodelling of the Tertiary sector, but rather a reorganization of the classification of economic activities on the basis of the functions of establishments and their logical ordering in the production system. However, this distinction is more difficult to practice due to data limitations and most empirical analysis still do not follow such a typology.

Service activities growth and economic development

In recent years industrialized countries have become service economies, and it seems evident that other less developed economies are headed in that direction as well. Only recently such changes are receiving some attention from economists. The first work to give some attention to the subject was written by Victor Fuchs in 1968, but some questions raised about the continuing ascendancy of services activities in advanced and less developed economies are still not answered.

There are three sets of classical explanation to analyse the growth of services activities (Baily and Maillat 1991:131). The first explanation concentrates on analyzing the reasons for changes in the relative and absolute share of tertiary sector employment, describing the phenomenon of tertiarization as process leading to the service society (Kon 1992). These explanations are based on a stages theory, according to which the demand for services outstrips the growth of disposable household income. It also stresses that there are productivity differences between services and industry, and that the tertiary sector is a pool for surplus manpower in the goods production sector.

The second way of analyzing the phenomenon is stressing that tertiarization is a result of the absolute and relative decline in employment in secondary sector (de-industrialization)

subsequent to the development of new and more productive technologies. This decline is also viewed as the effect of decreased consumption of industrial goods. Thus, de-industrialization is a consequence of the fact that with recent technological innovations, employment decreases, productivity increases, and investment is made more in machines than in blue collar jobs. In this case, the tertiary sector reabsorbs the manpower laid off, and the reallocation of capital to service sector is made with higher returns and profitability (Kon 1992 and 1995).

The third set of explanations points that falling employment in the secondary sector is due to rising employment in the public sector, which is a consequence of increased demand for collective services.

Economists, following geographers, recognize that services are an urban phenomenon. Some studies referred to a close relationship between the proliferation of services and extensive urbanization (McKee, 1988:8). Nevertheless, tertiary activities have been generally considered to play a subordinate role in urban expansion, and manufacturing has been recognized as the prime mover in urban growth, since the beginning of this century. Since the 1930s, the manufacturing sector in the more developed countries has been generally recognized as the economic base of an urban area. The economic base theory suggest that the foundation for any local economy is its export base, that is, urban agglomerations retain their viability as local economies to the degree to which they are able to supply output to areas external to themselves (Hoyt, 1960). A development of this argument emphasizes the strong backward linkages of manufacturing industries into local economies, besides being more likely than services to achieve economies of scale. On the other hand, most part of services apparently have low levels of productivity growth, what reinforces the view that services are less productive than manufacturing.

The acceleration in the development and diversification of service industries in the second half of this century, is placed against a background in which services were overshadowed by the visible impact of manufacturing upon towns, cities and regions. Thus, services activities have been thought to perform a subordinate role, which remain viable only as long as the manufacturing sector is. If this sector decreases, and the export base falters, the services activities would suffer the effects of reverse multiplier. Uneven development in some regions is argued to be a consequence of the reorganization of some industrial firms in the face of declining demand for their production and competitive pressure, both of which encourage improvements in labor productivity. Automation and technological change make the production process more capital-intensive and reduce the demand for production workers, while within a general decline in manufacturing employment an increased share of managerial, technical and support staff reflects the increasing tertiarization of production and the growing division of labor in large enterprises (Kon, 1995).

For some decades, the analysis of the service sector as complementary, had some historical validity in some cities in advanced countries, but it is an oversimplification of the role of the services activities are playing today in those countries and mainly in less developed ones. We can find today some nations whose economies are service oriented, and we cannot suppose that in those countries service sector would be a synonym for subordination and weakness. Baily and Maillat (1991:130) stress that it is a misconception if services are considered to grow only at the expense of manufacturing activities and if the development of service activity is viewed as a new stage of economic growth. In the first case, the development of circulation, distribution and regulation activities reflects the need of firms to devote increasing amounts of resources in services in order to increase their productivity and their innovation capacity. In the second case the development of service activity only reflects a constant evolution of productive systems, and tertiarization is not a separate phenomenon even if it is related to de-industrialization.

Summing up, there are some general theories in which the growth of services is seen as a stage in the long-term transformation of economies, as the three-sector model theory (Fisher, 1936; Clark, 1940) the emergence of a post-industrial economy, de-industrialization or the transition to an information economy (Daniels, 1993:14). According to this theories, services industries belong to the most advanced stage of development in an economy, preceded at earlier stages by agriculture and manufacturing, by substitution of white-collar for blue-collar occupations and trend towards upskilling and upgrading the labor force as the key resource or by access to, and availability of information as the principal factor of production in place of raw material or labor. The information technology and communications technology binds together the service and the information economies and the contribution of services to economic development and to the world economy, has changed and increased since the convergence of computing and telecommunications from the mid 1970s.

Some authors (Ochel and Wegner, 1987; Kon, 1994) stress that the information technology has transformed economies in many ways. In the first place, what is produced or the product mix has been altered such that there is a growing complementarity between goods and services, with the development of new services and greater product differentiation, rather than mass production. Second, market have been changed to embrace more internationalization and growing tradeability of services. Another reason is that the location of production of services has been modified, again including internationalization, and finally there has been a transformation of production processes.

The three-sector stage economy analysis is still widely used, including some times a quaternary sector, but only describes a process of economic and social change that results in the services becoming the largest single group of economic activity or employment. However, does not provide an explanation for the growth of services activities, because services activities are

very heterogeneous and the various groups have different characteristics and different factors affect their development (Kon, 1992). Further, as national and global economies become increasingly intertwined, these three major sectors are more difficult to substantiate and are more indeterminate, as we have already seen; this has been enhanced by the growing of the transnational service corporations since the 1980s.

The stage theory of economic growth, as already seen, is one of a group of theories that are classified as based on production factors; it stresses that technological progress has made increasing impacts in the development process which involves a shift of emphasis from fixed capital formation in manufacturing plants and infrastructures to fixed capital formation in business services. Another theory based on production factors is the principle of comparative advantage, that explains patterns of trade in goods, and it shows how differences between countries, in infrastructure capital and in human resources as skills and education, can be used to account for variations in the patterns of trade in services (Daniels, 1993:16).

Other theories also explain expansion in service activities through demand factors. In the first place, as the disposable incomes rise, the demand for certain services also increases, as e.g. for leisure, tourism, consumer durables, private health care, etc. Services are income elastic, because they are affected by changes in tastes, in priorities and in prices. About this statement there are some discussions because some data from several European countries show that the real consumption of privately purchased services was in decline during the 1960s and 1970s; this was explained by the fact that as incomes rise the price of services also increases, rather than the quantity purchased, so there is a disagreement about the strength of the relationship between demand of services and the degree of discretion which final consumers can exert (Daniels, 1993:16).

Another demand-relation explanation for service employment rise is that labor productivity improvements have been lower for services than for manufacturing and these activities will require an ever larger percent of the labor force, even if the demand is spread uniformly across all sectors of the economy. Data show that labor productivity, measured as real GDP per employed person, in developed market economies, as well as in developing ones, is consistently lower for private services than for manufacturing (Kon, 1992). On the other side, as stressed by Baumol (1967 ; 1987), it is not possible to contemplate increases in productivity in all services and while some personal services' productivity has remained more or less unchanged, other services have been able to achieve large increases in productivity due to advances in technology. Baumol exemplifies showing that the same number of musicians are needed to play a Beethoven quartet in the late twenty century as in the eighteenth century, and productivity has not changed. But technological advances in recording, reproduction and transmission of music

have made it possible for an almost limitless number of people to listen to the music, and in these terms, the productivity of the musicians has improved.

But since the "information economy", employment in services has been expanding even if some sectors have witnessed improvements in productivity (Castells, 1989:136; Moraes,1996). The "information economy" is described as a recent phase (since the 1980s) of the economic development, where the production of information goods and services dominates wealth and job creation and computers and telecommunications provide technological potential for product and process innovation. Information improves the productivity in any sector, but management, acquisition and interpretation of that information are labor intensive, even though powerful information processing technology is now available. Castells suggest : " Behind the expansion of the service sector, directly in terms of employment, and indirectly in terms of its effects on output, lies the development of the information economy."

Riddle (1986) cites two other demand-related factors in service sector expansion. One is the level of urbanization and the second is international trade or export-led growth. The growing interdependence of nations within the global economy developed increasingly in the 1970s and 1980s, including low-income countries. In recent years, institutional factors such as changing product and market strategies, corporate structure and public policy were shown as important factors affecting the growth of services at national and international level, as it will be seen later.

The fast changing dynamics of the demand for services has brought about some flexible specialization, because producers of goods and services had to adopt strategies aiming to achieve permanent innovation and adaptation. This flexibility was possible by attracting and training skilled labor, by developing networks of interfirm cooperation and by using a considerable level of flexibility technology (Kon, 1994). With the same stock of capital and labor, firms can guarantee that a wide range of services is developed, produced and distributed. Further more, flexibility enables services with a limited production life to become practical from an economic point of view; it also allows firms to adopt location patterns that are more dispersed, with less organizational control. Firms are, in this post-industrial economy, conscious of the need to reduce exposure (or stock, in just-in-time systems), to control quality, to subcontracting or outsourcing, and to view labor as a capital asset.

Noyelle and Stanback (1988) list some transformations that are reinforcing the shift of economies to services, mainly in the developed countries: the rise of large corporations, technological change, increases in market size and product differentiation, the development of new consumer markets and the growing influence of government and non-profit organizations.

In what refers to the extension of those transformations in the economic systems, it was also observed that even if service activities are considered in a urban framework, the forces of demand and supply in this sector respond to the needs of national and international markets.

Services activities, on its most sophisticated forms, as industrial, professional, financial and higher kinds of entertainment services has been concentrated in large metropolitan areas. But advances in communications and economic integration at the national and international level have cast some doubts upon a direct correlation between city size and the relative local importance of services. Industries and its consultants are more footloose within the confines of the national market, and maybe even as to the world economy, as we will analyze later on.

With such a background, many transnational service corporations in both developed and developing countries decide their foreign direct investment according to the possibilities of better response to the demands. An UN study directed by Sauvart (1993) has investigated empirically the determinants of these foreign direct investments. The conclusions of the study showed that when firms in services industries invest abroad, their motivations are similar to those investors in manufacturing industries, that is, those firms like to operate in large markets, populated by cultures not too different from their own, with a minimum amount of government restriction, to supply pre-established client firms from their own country. Firms in oligopolistic industries tend to be particularly active because entry barriers limit the scope for easy entry by marginally profitable firms. But even if services firms are location-bound, technology is beginning to change this attribute.

National market have developed producer-related services and also consumer services. Improved communications occasioned a demonstration effect, which has geographically diversified these consumer services, from the city localization. The market for various services that were needed in large urban areas spread, in response to consumer interest, and the supply side of service markets have expanded in a fashion unrelated to the economic base or the needs of a metropolitan environment (McKee, 1988: Chapter 2).

Aside the fact that these consumer services are often among the most visible components of the tertiary sector, they are also often among the weaker services activities, mainly in less developed economies, in the sense of smallness, lack of operation expertise and a lower capital/labor relation. The proliferation of such services throughout the world economy mainly until the seventies, has made arise a tendency to identify service development in both advanced and emerging nations in a generalized way, concerning its functions. Cross sectional studies of various countries tended to explain services role in national and in world economy, but very little explanation was achieved, mainly because service categories must be disaggregated so that international services functions can be identified. Recently, various services have surpassed their traditionally subordinate and local positions within national economies and this fact leads to the need for a closer look at international services roles.

As mentioned before, since the 1970s, the pace of the advance of new services has quickened and researchers attribute this expansion in the advanced countries, to a variety of

factors. Among those, as we have already seen, are rises in population and income levels, and also urbanization, besides the demonstration effect before mentioned. Even if some of those new services cannot be defined as necessary, they have enjoyed an impressive expansion also in the less developed economies, as we can see from Table 1. But it is discussed if may be the complementary service category still represent the real strengths of the service sector, because the employment figures, taken on a world scale support this hypothesis.

As we can see from Table 1, although service expansion was initially observed in High-income industrialized countries, and fastly spread to Upper-Middle income ones, the average annual growing rates are relatively (but not absolutely) lower in those economies than in Low-income and Lower-Middle income countries, according to the World Bank classification. This is due to the fact that the productive structures in those last countries are relatively less representative in the service sectors, which implies that the growing rate is compared to a very low basis, and the impact of the changes is higher. In those less developed countries the industrial production showed a higher growth rate, mainly in the 90s, and the rates of service activities were also considerable.

Nevertheless, it is observed the increasing importance of the share of service production as the level of income is higher. It verified that even in the Lower-middle income countries in the 1990s, this representativity is more than 50% of the total production and the so-called industrialized countries reached around 64% in 1994.

But the transformations were not only in the amount of generated product. In recent years, mainly after the 1980s, the world economy has been characterized by substantial shifts in manufacturing activities nature, and the product demands are being met by an integrated world economy. The role that services may be playing in the development process of the less developed economies, is a question to explore. Specifically, to verify to what extension service activities in those countries may influence the expansion of the modern sector and what is the potential of the service sector with respect to the creation of employment opportunities. The creation of employment opportunities is one of the most pressing problems facing a great part of the world economies and mainly the developing countries. In these nations only about 25% of the population has access to the modern sector. In such circumstances, the opportunities of broadening employment can more easily arrive from the less developed sectors. Fuchs had already demarked in 1968 that the dramatic shift to services was a shift in employment rather than output, a phenomenon that became more evident in the end of the seventies.

However, as we can see comparing GDP and labor force distribution since the 1970s (Tables 1 and 2), labor force restructuring among economic sectors in economies of all levels of development, followed the same trend as distribution of product generation, that is to say result in

the growth of the tertiary sector share in labor force and in the decrease of the industry share in the more developed countries.

But this kind of restructuring had different dynamics, in diverse economies depending on the grade of technological modernization in production processes and on the correspondent level of qualification of labor force. In the less advanced countries, the surplus labor in the agricultural sector, led to migrations into metropolitan areas, often have few skills to offer and even where the modern sector activities are expanding, the labor absorption rate in those activities may be modest (Kon, 1979: Chapter 1). In an expanding urban economy, service activities which are correlated to

Table 1
Productive Structure- Product Distribution and Growth (%)

Sectors Economies	Agriculture	Industry	Services	GDP
Low-income				
Distribution				
1970	47	19	34	100
1980	34	32	32	100
1994	28	34	36	100
Growth*				
1980-90	3.5	7.4	6.8	5.8
1990-94	2.8	11.0	5.2	6.2
Lower-Middle income				
Distribution				
1970	32	26	42	100
1980	18	40	42	100
1994	13	36	51	100
Growth*				
1980-90	3.4	6.9	7.0	6.1
1990-94	3.0	9.8	7.6	7.6
Upper-middle income				
Distribution				
1970	15	34	51	100
1980**	8	47	45	100
1994	8	37	55	100
Growth*				
1980-90	2.5	2.1	2.7	2.2
1990-94	0.9	2.6	4.4	3.4
High income				
Distribution				
1970	4	40	56	100
1980**	5	36	59	100
1994	6	30	64	100
Growth*				
1980-90	2.3	3.2	3.2	3.2
1990-94**	1.1	1.6	1.5	1.7

-

Source: International Bank for Reconstruction and Development, 1976, World Bank; World Development Report 1996 - World Bank.

* Average annual growth rate. ** Average of selected countries.

Table 2
Labor Force Distribution

	(%)		
Sectors	Agriculture	Industry	Services
Economies			
Low-income			
1970	77	9	14
1980	73	13	14
1990	69	15	16
Low-middle income			
1970	54	16	30
1980	41	26	33
1990	36	27	37
Upper-middle income			
1970	38	23	39
1980	31	28	41
1990	21	27	52
High income			
1970	12	37	51
1980	7	35	58
1990	5	31	64

Source: International Bank for Reconstruction and Development, World Bank, 1976; World Development Report 1996 - World Bank, 1996.

rising incomes, are expected to expand as well. As a result, other consumer service opportunities would also expand according to urban employment multipliers. This expansion of service employment opportunities are said to be an effect rather than a cause of urban expansion that is to say they are a symptom rather than a cause of development.

In the urban labor markets of the developing countries, labor absorption has not been able to keep up with the continuing flux of people. As the wages in the modern sector are inflexible downwards, the flow of immigrants continues, based upon unreasonable expectations and the new entrants to urban labor markets general lack the skills to attain employment in the leading sectors of the economy (Kon, 1995; Kon, 1992), as we have seen; thus, as the surplus of

immigrants goes to the less modern activities, the average wages are depressed and these economies are faced with a continuing and increasing surplus labor and remuneration problem.

As the employment opportunities in the modern sector are more difficult, many new arrivals must work in the activities to be known as the informal sector (Cacciamali, 1983; Chully, 1992) at survival conditions. These workers are employed in circumstances that deny the advantages of a formal wage contract. The continuing flow of new arrivals to this informal sector -- due not only by the surplus labor in the agricultural sector but also recently by the surplus labor in the manufacturing sector -- keeps earnings in that sector near subsistence for a great part of the workers. Nevertheless, with the growing of the global economy and the productive restructuring and the outsourcing occurring in the big oligopolistic enterprises, many former industries workers relieved from their jobs in those firms, try to work by his own account as autonomous; and besides this, it is also found entrepreneurs in the informal sectors, some of them making material progress.

But the opportunities for this entrepreneurs to grow through capitalization are limited by increasing competition as well as by the nature of their business. Even though there is some interplay between the labor markets of the informal sector and of the modern sector (Kon, 1995: Chapter 3), and some of this informal production is sold to formal enterprises, the growth of many informal enterprises is restricted because what they offer would not be marketable beyond the confines of some less privileged districts. A considerable part of those informal activities is service oriented, and some member of this work force perform "invisible" and "underground" activities. Thus, in the developing countries, the absorptive capacity of the informal service sector is much less a function of the increasing capitalization of the sector than of the ability or the urban area to provide subsistence to workers of petty services.

Thus, if the process of development in those developing countries is enhanced by the service sector, such a result must be found in the modern formal activities, and not in the low-skilled service opportunities as the reliable engine for the growth process. And more than this, in this process, service opportunities are not exclusively related to manufacturing pursuits, but have its own increasing dynamics.

As stressed by McKee (1988), one of the functions of the service activities in national economies, besides their urban location, is the fact that they have been recognized as facilitators or strengtheners of the impact of the growth poles, that is, the activities that have taken the lead both quantitatively and qualitatively in determining the pattern of expansion at the national level. The ability of services to perform similar function in the development process depends on the kind of activities in the growth pole, its size and strength and if its dominance is local, regional, national or international (Perroux, 1970).

Besides this, service activities play an important role in manufacturing sector, because they straighten and prolong the impact of leading manufacturing sectors, while smoothing the transition as new manufacturing sectors assume leadership roles. This shifts in leadership occur among manufacturing activities in advanced economies and the repercussions are felt throughout the global world economy. On the other hand, it was observed until the eighties, that such changes led to relocation of production facilities to the developing countries, where labor costs and environmental constraints were more amenable to the traditionally strong industries, mainly when those activities have lost their preeminent positions in advanced economies, but their products were still demanded in a world scale. But after the growing of the globalization of the economies specially since the end of the 1980s, those industries had more advantages in relocate their activities in modern economies, where more qualified labor and other complementary sophisticated services are found. In many cases the service firms became multinationals and transnationals, and the host less developed countries have benefits because a number of business-related services supply linkages which renders possible many manufacturing facilities to exist.

At a domestic level, locational changes reflect the growing dualism in the workforce, since manufacturing investment had moved either to areas where scarce skilled "white collar" workers are available or to areas of low wages and high unemployment, where a semi-skilled workforce can be recruited to carry out largely routine production activities in branch plants (Marshall, 1988).

In the most part of the developing countries, such services may increase the dependence on the world economy and in foreign business interests, but the impact they have over the production units, and on economic expansion and labor absorption may be considerable. Besides this, the effect would be stronger if the less advanced economies can develop their own complement of needed services and their ability to do so will depend on the size of their domestic markets, the availability of appropriate job skills or their ability to develop them.

As we can see from Table 3, it is observed that to the diverse level of economic development of the economies, there are associated specific conditions of the occupational structure, which is a result of the characteristics of the respective productive structures, either more specialized in the agriculture sector, or in the urban sectors, and also according to different technological degrees on the production processes. In this sense, if the low income countries are more specialized in the agriculture sector, as seen in Tables 1 and 2, and the representativity of service activities grows as the industrialization processes increases, it is also verified in Table 3 that the percent of workers in more skilled occupational categories of Professional and Technical and also in managerial functions, is also higher in the countries with higher *per capita* incomes, although downsizing in organizational structure, since the 1980s lowered the growing rates of those occupations, in order to cope with rising costs. On the other hand, data also show a higher

percentage of other service occupational categories as the income is higher, that is, around 21% to low-income countries, 25.5% to Lower-middle, 37% to upper-middle and 49% to high-income ones in the 1990s.

Correspondent to the mentioned sector restructuring, when we observe the difference in the representativity of occupational categories between the periods of the 1970s and 1990s, the most important and very significant decrease it is seen, for all countries of different income levels, in the agriculture and rural occupations (due to production processes modernization or capitalization as already seen) which is counterbalanced by lower increases in the several other categories. Besides this, the increase in service occupations is even higher than in industrial and transport ones, and in high-income countries, the representativity of this last group has also decreased (confirming the results showed in Table 1 and 2), showing the impacts in the occupational structure as a result of industrial restructuring, outsourcing of enterprises services, and the change in the classification of some services, considered as industrial categories before the technological and organizational changes had occurred.

Table 3
Occupational Structure*

		(%)			
Occup. categories\	Economies** Period***	LI	LMI	UMI	HI
Professional & technical.	1970s	2.1	4.8	5.9	12.1
	1990s	4.0	5.1	6.6	15.1
Administrative & managerial.	1970s	0.2	1.2	1.1	6.4
	1990s	0.7	1.0	2.3	8.5
Clerical & related.	1970s	1.3	3.8	7.4	15.4
	1990s	2.6	5.7	7.6	15.6
Sales workers	1970s	5.4	7.1	7.5	10.5
	1990s	9.7	11.9	11.4	12.2
Service workers****	1970s	4.5	8.2	12.9	11.1
	1990s	8.2	6.9	12.3	12.7
Agriculture & rural	1970s	73.6	56.8	37.2	7.0
	1990s	53.7	40.8	30.1	5.0
Industrial & transport.	1970s	12.4	16.2	25.7	32.6
	1990s	19.0	25.4	28.4	29.7

Source of primary data: *Yearbook of Labour Statistics. Retrospective Edition on Population Censuses, 1945-89*, ILO Geneva, 1990 and 1994.

*Average composition of selected countries.

** LI=Low-income; LMI= Low-middle income; UMI=Upper-middle income; HI=High income.

*** 1970s= 1970-80; 1990s=1990-93.

**** Include workers not classifiable by occupation.

Although many developing countries have more than 50% of their economically active population in services activities, the positive role of services in the development process is yet discussed. Some researchers believe that only if jobs opportunities in the modern sector are opened, and medium wages increase, as income grows and domestic market is encouraged, new service modern activities will be introduced domestically, which will begin to provide the linkages enjoyed by the economies of developed nations.

On the other side, as already seen, the roles of service and production industries in the economy are becoming increasingly interdependent, that is to say that the traditional relationship between manufacturing and services, in which the first demands inputs and the second supplies them, no longer holds true for important parts of the two sectors. In some industries, the division between production and services is difficult to draw. For example, as stressed before, in the manufacture of data processing equipment, the service inputs (software) are necessary to make the product work and also have a great influence on the success of the product in the marketplace. Marshall (1988:4) show us another example, in the newspaper production, where the service component advertising has become a major source of income and the product has to compete with other service media, such as television and radio. Competition is rising among production and services firms, as diversification and acquisition allow them to penetrate each other's traditional markets. Besides this, some more sophisticated services activities such as transport, distribution and financial services are becoming increasingly capital-intensive, like goods-processing industries.

The dynamics of economic restructuring

The growth in service sector and its implications over the restructuring economies, as we have seen, have different impacts on the productive structure according to the level of economic development of the economies, and the capacity of increase the investments in technological modernization and in qualifying labor force in order to cope with the needs of new technical tasks of modern organizational and production processes.

As stressed before, productive structure has been fastly changing in developed countries, since the increasing industrialization from the 1930s on, with the growth of the urbanization process and with technological innovation. Some less developed economies began the same structural changes around the 1950s and some other are only recently beginning with this process, as we could see from the empirical data.

Some studies show the restructuring of service sector as based on the spatial division of labor, which affects the number and characteristics of jobs available in different places (Marshall and Wood, 1995: 59). This division of labor refers to the pattern of work specialization in

production, developed over time to ensure the efficient use of capital investment. Distinct countries and distinct regions of a country are specialized in particular products and sector, which supported dominant local forms of capital-worker relationships, labor skills and social and community patterns (Kon, 1995:Chapter 1).

During the 1950s and 1960s, the growing dominance of large manufacturing firms in the developed countries shaped the patterns of regional industrial specialization. While pursuing profit goals, those firms deploy resources on an inter-regional or international scale, seeking out new opportunities to exploit labor in different places. They could transfer not only production work to cheaper locations, but they also tended to separate various types of white collar work, including control and research functions from blue collar production.

The background for this tendency was the possibility of flexible specialization, that has developed to face the persistent economic crisis that has superseded the long boom of the world economy after the Second World War. During that period management tended to use technical progress to organize the labour process in a strongly hierarchical manner and to substitute human labor as far as possible by machinery, following the paradigm of mass production of standardized goods which was fully explained by authors as Gramsci, Aglietta, Lipietz, Luscher (Fordism). Under this system it was characterized the growing of cities and increasing differentiation between areas of work, housing and leisure. Business was organized in a strongly hierarchical way with a mass of unskilled workers at the bottom of the hierarchy. Technical progress was linked to systematic processes of deskilling of large categories of occupations (Braverman, 1974).

But towards the end of the 1960s, Fordism got a series of difficulties, and many firms had to realize that productivity was growing considerably slower than wage costs, not only the big manufacturing firms but also the hierarchical structure. Meanwhile new information technologies have opened up important new possibilities. Spatially distributed branch networks could be coordinated more effectively and service activities could be reshaped by the introduction of electronic machinery, systems of flexible automation in manufacturing which combine heavy mechanization with production of small batches.

Thus, during the 1970s and particularly in the 1980s, a new kind of restructuring and of international division of labor developed, due to technological changes based on flexible forms of work organization and of production processes, which needed a more qualified labor because less qualified and cheaper labor did not longer show comparative advantages. In this sense, the movement of capital internationalization following investment in production, begin to search for economies which offered more sophisticated specialized services. As a result, most part of developed and developing countries are passing through considerable changes in the production

structure of their economies according to the capacity of offering to those new investments, the basic infrastructure to support those transformations (Kon, 1995; Kon 1996).

Manufacturing employment are declining mostly because of some forms of production reorganization affecting levels of employment: work intensification, rationalization of production and investment and technical change (Massey and Meegan, 1982 and Massey, 1984), and the restructuring has also been extended to private consumer and public sector services additionally to the producer services (Marshall and Wood, 1995:60).

As already stressed, when we observe the difference in the representativity of occupational categories between the periods of the 1970s and 1990s, it is seen, for all countries of different income levels, a decrease of the agriculture and rural occupations (due to production processes modernization or capitalization) and an increase in the other categories. Besides this, the increase in service occupations is even higher than in industrial and transport ones, and in high-income countries, the representativity of this category has decreased, showing the results of industrial restructuring, outsourcing of enterprises services, and the change in the classification of some services, considered as industrial categories before the technological and organizational changes.

Thus, as stressed by Marshall and Wood (1995:70), service developments must be understood as a component of wider processes of economic and social restructuring, which are shaped by the demands of profitable production in market-based economies. Although goods and service production are mutually interdependent, the services often play a more prominent role in this restructuring, because they have a leading role in creating wider change, by providing key expertise, and the consequent tendency of service growth to create inherently uneven patterns of development.

The significant changes that advanced economies have undergone in recent years include: a) the internationalization of economic activities; b) the reorganization of dominant firms; c) the increasing integration of manufacturing and service production; d) the growing use of micro-electronics technology; e) the growing demand in industry for a highly skilled workforce, but many routine jobs being displaced by technical change; f) the increasing complexity and volatility of consumption; and g) a changing role for state intervention (Marshall and Wood, 1995). These changes were interpreted as a shift from a Fordist society based on large-scale mass production and consumption, supported by government demand management and welfare spending (mainly in the more advanced nations). As already seen, post-Fordist forms of production emerged since the 1970s, where industry utilized new technology and a more "flexible" work force, to respond more rapidly to market change and international competition (Kon, 1996), encouraged by a slimmed down and more entrepreneurial style of government.

But if those changes occur more rapidly in more advanced countries, it is also observed a similar dynamics of restructuring in the sense of growing of service occupations in other low and middle income countries, although in a slower speed, as we can see from Table 4, for some selected representative countries. For each level of economic development, it is found similar patterns of occupational structure and of restructuring, during a period of time due to industrialization and technological modernization.

The statistical data also shows for the selected countries, that in a general way those patterns of restructuring in the beginning of development, are related to the increase of both industrial and services occupations as rural occupations decrease. But in the highest levels, the increase is observed only in the service occupations, while the industrial ones also decrease, as already seen.

Marshall and Wood emphasize that the growing prominence of services and their significant and multi-faceted contributions to structural change, arise from:

a) the importance of the growing interdependence of goods and service production, as already seen, because any material or service product is created by a complex sequence of material and service exchange involving suppliers and users, including subcontractors and consultants;

Table 4
Occupational Structure-Selected Countries

\Occupational \categories*		Prof.& Tech.	Adm.& Manag.	Cler.& relat.	Sales workers	Serv. workers	Agric.& Rural	Indus.& Transp.
Economies								
Low-income								
Egypt	1976	7.5	1.1	7.3	6.5	10.4	42.0	21.4
	1993	12.6	1.1	6.9	7.1	34.2	24.9	
Ghana	1970	3.9	0.4	2.8	13.1	2.9	57.4	19.6
	1984	4.1	0.3	2.4	13.8	2.4	60.6	16.4
Liberia	1974	3.5	0.3	2.5	3.2	7.9	70.2	12.5
	1984	4.0	0.6	1.6	6.7	7.2	70.1	9.7
Bangladesh	1974	1.8	0.2	1.0	4.6	3.3	77.2	10.9
	1981	2.5	0.7	2.4	10.8	8.6	58.7	16.3
Lower-Middle Income								
Costa Rica	1973	8.3	1.8	6.0	8.1	14.3	36.7	24.9
	1984	5.3	1.3	5.3	7.6	15.0	47.1	18.9
Ecuador	1974	5.3	1.0	3.8	8.0	12.4	46.7	22.8
	1982	8.1	0.5	5.8	9.2	15.0	34.7	26.6
Maroc	1971	4.0	0.2	2.8	5.6	16.8	51.4	19.1
	1982	5.4	0.2	4.0	7.6	14.6	39.7	28.5
Philippines	1976	6.6	0.7	4.7	7.1	11.0	49.2	20.6
	1993	5.2	1.2	3.9	12.2	7.9	41.4	19.1

Upper-Middle income

Upper-Middle income								
Brazil								
	1980	6.6	2.6	9.6	7.7	19.5	28.6	20.7
	1993	7.5	4.6	10.4	10.7	22.1	21.1	19.6
Chile								
	1970	5.6	1.7	8.6	7.1	24.2	20.7	32.0
	1993	8.3	3.4	13.9	11.9	13.2	16.3	32.4
Greece								
	1981	9.6	1.8	9.7	8.7	9.5	28.2	32.4
	1992	16.2	0.7	16.9	13.0	13.7	24.8	14.8
Korea Rep.								
	1980	4.3	1.0	8.9	11.3	6.6	35.1	26.3
	1993	2.7	4.5	7.5	12.2	20.4	13.4	37.0
Mexico								
	1980	7.3	1.1	9.6	7.3	22.8	25.1	25.6
	1993	8.9	1.7	7.9	14.8	11.4	26.4	26.5
Malasya								
	1980	6.5	0.9	7.5	8.8	8.1	30.9	30.6
	1993	7.8	2.2	9.8	11.4	11.4	26.2	31.3
Turquie								
	1980	4.5	0.9	3.5	4.3	5.1	59.7	22.0
	1985	4.9	0.8	3.6	4.8	5.4	58.7	21.8
Uruguay								
	1975	7.6	1.3	11.3	10.0	23.1	16.4	30.2
	1992	10.7	3.7	14.9	13.2	13.7	4.9	33.8

(continues)

(continuation)

\Occupational \categories*	Prof. & Tech.	Adm. & Manag.	Cler. & relat.	Sales workers	Serv. workers	Agric. & Rural	Indus. & Transp.
High -income							
Australia							
1981	12.8	5.0	16.1	8.0	13.6	6.0	31.5
1991	10.7	11.1	6.0	11.9	19.3	12.2	17.2
Canada							
1980	15.5	5.0	18.2	9.3	16.9	5.1	27.2
1993	17.9	12.8	15.4	9.6	14.5	4.9	24.5
Italy							
1971	7.7	0.7	11.2	9.2	9.4	17.4	44.4
1981	13.5	1.2	12.4	11.7	7.8	11.3	42.2
Japan							
1980	8.4	4.6	16.1	14.2	8.2	10.6	35.6
1993	11.9	3.8	19.1	14.7	9.5	5.9	35.2
Netherlands							
1971	13.5	2.3	15.7	10.6	15.7	6.3	36.0
1981	19.9	2.7	19.0	10.5	12.6	5.5	29.9
Singapore							
1980	8.5	4.7	15.0	11.8	15.6	1.9	39.0
1993	10.3	6.0	14.0	14.7	17.4	0.1	37.0
Sweden							
1980	26.1	2.5	14.2	8.1	13.6	5.6	29.5
1993	31.4	8.2	15.3	9.0	9.4	3.2	23.6
United States							
1980	14.1	9.6	15.9	9.2	11.9	2.7	28.7
1993	16.6	12.3	15.1	11.7	14.9	2.8	25.8

Source of primary data: *Yearbook of Labour Statistics. Retrospective Edition on Population Censuses, 1945-1989*, ILO, Geneva, 1990 and 1994; Kon, 1995 (for Brazil)

b) the value of service expertise in late twentieth-century capitalism, which contributes to the manipulation of materials, information, capital or labor, in any production or consumption

activity. Interpreting the world becomes more complex, and manufacturing and service production becomes more capital-intensive, and the role of skilled service expertise thus grows;

c) the way service skills and expertise, embodied in the workforce have a significant influence on locational patterns. The complexity and diversity of modern service expertise encourages agglomeration at least of high-level functions; more routine functions may be more dispersed, although still controlled centrally. These trends have dominated the evolution of urban regions in recent years, and also now influence patterns of manufacturing location, as service expertise offers not just technical or material transforming expertise, but also organizational skills (Kon, 1994:Chapter 9).

d) the way technical change is creating new opportunities for the exploitation of service expertise.

On the other side, Barras (1986) examining two developed countries as USA and UK, stresses that capital expenditure in those economies has recently shifted from buildings to equipment, especially to technology based on micro-electronics, reflecting a "reverse product cycle" in service production, that is, the introduction of computer power initially leading to improvements in the efficiency of service production, then improvements in service quality and finally a range of new services, as seen on Table 5.

Table 5 - Barra's view of the reverse product cycle in services

Stage of cycle	1. Improved efficiency	2. Improved quality	3.New Services
Period	1970s	1980s	1990s
	Computer technology	Mainframes	Online systems; Networks minis and micros
Sector applications			
Insurance	Computerized policy records	Online policy quotation	Complete online service
Assistance	Computer audit; internal time recording	Computerized management accounting	Fully automated audit and accounts
Local government	Corporate financial systems (e.g. payroll)	Departmental service delivery (e.g. housing allocation)	Public information services (e.g.videotext)

Source: Miles(1993).

Information and communications technology are leading to the industrialization of services, to organizational innovation and to new forms of service trade, as to the linking of producer and consumer, e.g. telephone banking, sales and travel services. Some main characteristics of services and technical innovation, as examples of the dynamics of restructuring of services, can be summed up according to service production, product, consumption and market (Miles, 1986 and 1993; Baumol, 1986; Nusbaumer, 1987; Normann, 1991).

Concerning to service production the main transformations observed are as to:

a) *technology and plant* - the former situation of heavy investment in buildings is replaced by the concern about to reduce cost of buildings for instance by use of teleservices, toll-free phone numbers, etc;

b) *labor* - some services highly professional (especially requiring interpersonal skills) and others relatively unskilled often involving casual or part-time labor, are replaced by the reduced reliance on expensive and scarce skills, by use of expert systems and related innovations, and by relocation of key operations to areas of low labor costs (using tele-communications to maintain coordination;

c) *organization of labor process* - the workforce often engaged in craftlike production with limited management control of details of work, gives place to the use of information technology (IT) to monitor workforce (e.g. tachometers and mobile communications for transport staff), aiming for flatter organizational structures, with data from field and front-of-office workers directly entering databases and thence management information systems;

d) *features of production* - non-continuous production and limited economies of scale are replaced by standardized production (e.g. fast-food chains), reorganized in more assembly-line like manner with more standard components and higher division of labor;

e) *organization of industry* - some service which are state-run public services and others often small-scaled with high preponderance of family firms and self-employed gives place to externalization and privatization of public services and also to the combination of small firms using networks technologies and IT-based service management systems.

In what refers to service product, technical innovation affects the following characteristics:

a) *nature of product* - non-material, often information-intensive services, hard to store or transport, and hard to distinguish process and product, add material components (e.g. client cards and membership cards), use telematics for ordering, reservation and, if possible, delivery, and maintain elements of familiar 'user-interfaces';

b) *features of product* - services often customized to consumer requirements, make use of electronic data interchange for remote input of client details, in general by the use of software by client or service provider to record client requirements and match to service product.

As to consumption, service characteristics show considerable changes in:

a) *delivery of product* - when production and consumption are co-terminous in time and space and often client or supplier has to move to meet the other party, technical innovation make use of telematics, automated teller machines and equivalent information services;

b) *role of consumer* - services which are 'consumer-intensive' requiring inputs from consumer into design/product process, make consumer use of standardized menus and new modes of delivering orders (Fax, etc.);

c) *organization of consumption* - when is hard to separate production from consumption, or self-service in formal and informal economies is commonplace, it is observed increased use of self-service, utilizing existing consumer (or intermediate producer) technology, e.g. telephones, PCs and user-friendly software interfaces.

Finally, service markets are affected by technical innovation as follows:

a) *organization of markets* - some services delivered via public sector bureaucratic provision, or some costs which are invisibly bundled with goods (e.g. retail sector), are modernized by new modes of charging ('pay per'society) new reservation systems, more volatility in pricing using features of Electronic point-of-sale and related systems;

b) *regulation* - professional regulation common in some business make use of databases by regulatory institutions and service providers to supply and examine performance indicators and diagnostic evidence;

c) *marketing* - the difficulty to demonstrate products in advance is replaced by guarantees, demonstration packages (e.g. 'demo' software shareware, trial period of use).

However, those characteristics do not apply equally to private and public sector services, because of the nature of public services in one hand and in the other hand, due to the respectively diverse objectives of profit or social function, as we will see in sequence.

Private and public sector service restructuring

Some factors affect differently private and public sectors, in what concerns to the forms of service sector restructuring (Pinch, 1989). Those characteristics are found in developed and developing countries as well, and can be condensed in the following examples.

Partial self-provisioning :

a) Private sector: self-service in retailing; replacement of services with goods; videos; microwave ovens, etc.

b) Public sector: child care in the home; care of elderly in home; personal forms of transport, household crime prevention strategies, neighborhood watch, use of antitheft devices, vigilante patrols.

Intensification - increases in labor productivity via managerial or organizational changes with little or no investment or major loss of capacity:

- a) Private sector: pressure for increased turnover per employee in retailing.
- b) Public sector: The drive for efficiency in the health service; competitive tendering over direct labor operations, housing maintenance, refuse collection; increased numbers of graduates per academic universities.

Investment and technical change - capital investment into new forms of production often with considerable job loss:

- a) Private sector: The development of the electronic office in private managerial and producer services.
- b) Public sector: Computerization of health and welfare service records; electronic diagnostic equipment in health care; distance learning systems through telecommunications video and computers; larger refuse disposal vehicles, more efficient compressed loaders.

Rationalization - closure of capacity with little or no new investment or new technology:

- a) Private sector: closure of cinemas
- b) Public sector: closure of schools, hospitals daycare for under fives, etc.; closure or reduction of public transport systems.

Subcontracting - of parts of the services sector to specialized companies, especially of producer services:

- a) Private sector: growth of private managerial producer services.
- b) Public sector: privatization or contracting or off cleaning, laundry and catering in the health service.

Replacement of existing labor input - by part-time, female or non-white labor:

- a) Private sector: growth of part-time female labor in retailing.
- b) Public sector: domination of women in teaching profession; increased use of part-time teachers.

Enhancement of quality - : through increased labor input, better skills, increased training:

- a) Private sector: in some parts of private consumer services.
- b) Public sector: retraining of British Rail personnel; community policing.

Materialization of the service functions so that the service take the form of a material product that can be bought, sold and transported:

- a) Private sector: entertainment via videos and televisions rather than "live" cinema or sports.
- b) Public sector: pharmaceuticals rather than counseling and therapy.

Spatial relocation:

- a) Private sector: movement of offices from London into areas with cheaper rents.
- b) Public sector: relocation from larger psychiatric hospitals into decentralized community-based hostels; relocation of offices from London to realize site values and to reduce rents and labor costs.

Domestication - the partial relocation of the provision of the functions within forms of household or family labor:

- a) Private sector: closure of laundries.
- b) Public sector: care of the very young and elderly in private houses after reductions in voluntary and public service.

Centralization - the spatial centralization of services in larger units and the closure or reduction of the number of smaller units:

- a) Private sector: concentration of retailing into larger units; closure of corner shops.
- b) Public sector: concentration of primary and secondary hospital care into larger units, that is, the growth of large general hospitals and group general practices.

Although private services have received more attention in recent studies, public services gather a great part of service employment. These services are delivered by various combinations of local and national organizations, and some operate alongside an smaller private sector, which offers complementary and competing provision, for example in education, health and even security (Kon, 1996b). Public services, however, tend not to be judge by purely economic criteria of cost of profit, but by social or political criteria, including the possibility of access and the quality of delivery. Further, some are 'pure public goods', which cannot be provided by the private sector or by individuals, e.g. defence, administrative and regulatory functions or the state. In many nations, also 'natural' monopolies are publicly owned, especially those based on the control of infrastructure networks such as telecommunications or rail transport, and public control is also sometimes justified by national security considerations.

However, recently these claims have been challenged, resulting in a widespread trend of 'deregulation' or 'privatization' of such activities to attract investment and ownership, for example in telecommunications, energy and water supply, rail and air transport.

Public services make a significant contribution to economies. For example, in OECD countries account for an average of 33 per cent of total employment; European countries have experienced a substantial growth in the share of public sector in the 1980s, while Japan and the USA are exceptional, because they have a small public sector and increases in these activities have been less pronounced. But even in European countries, during the end of the 1980s, the majority of governments regarded this rapid growth of the public sector as harmful to their economic prospects, and most set about restraining growth.

Some economists consider that restructuring in the public sector (showed by the growth of employment) in many countries, since the 1960s, were due to some factors as : a) demands for improved health care and education services; b) expansion of public transport and communications infrastructure; c) growth of defence spending in some selected countries, until recently, reflecting the "Cold War" between East and West; d) Demographic changes, including growth in the numbers of elderly in the population, with greater needs for health and welfare services; e) Changes in family composition, including an increase in the numbers of women working, and growth in the numbers of single parents, which add to the demand for child care and welfare services; f) Interventionist policies during the 1960s and 1970s, to guide economic growth and restructuring, requiring more government workers; g) Greater physical planning controls to restrain or guide urban and industrial growth, thus minimizing its environmental impacts; h) Improvement in all parts of the public sector was seen to be an integral part of the long post-1945 economic boom up to the mid-1970s; i) Growing unemployment (more recently) (Marshall and Wood, 1995:186).

Those needs, corresponded to the welfare politics in the developed countries, but are also found in the less developed ones. However, the economic slow-down of the 1970s and 1980s in the developed nations, and concern over the inflationary impacts of rising public spending, led to a drive for cuts in some public services, and greater efficiency in providing others. Such pressures, and the end of the Cold War justified a restraint in public spending which had the consequence of a progressive reorganization of public sector provision. Further, a part of the provision also shifted in some sectors from public to private or voluntary sector organizations more recently known as Non Governmental Organizations. Nevertheless, public services remain a large and diverse sector in many local economies.

Many services are a prerequisite for development rather than just its final product, and their adequate provision becomes a crucial element and launching the economy on a dynamic growth path. In the case of industrialized countries, public intervention or market mechanisms

can be alternative sources for the adequate provision of services. But in the case of less-advanced economies, market mechanisms for the provision of such services may be inexistent or inadequate and this as well as the public good character of some services have been used as an argument for public intervention in the service sector in those countries. Public intervention then, can take the form either of direct provision of services by government administrations or enterprises, or of the protection of the domestic market against foreign competition in order to encourage the establishment and growth of infant service industries.

Those political options for developing countries have been discussed in the United Nations Conference on Trade and Development (UNCTAD), and recently there has been a most important trend to stimulate market-led policies instead of governmental intervention. It is stressed that policies that tend to exacerbate public intervention would merely result in turning the national economies into permanent importers of foreign services and in deepening their dependence on transnational corporations active in this field of services. On the other hand, most developing countries are facing budget unbalances with considerable deficits and the solution to balance in most part of the cases is to limit public intervention and facilitate provision of services through market mechanisms.

The consequences of internationalization of services

The transformations in productive structure were not only in the amount of generated product or in technological processes. In recent years, mainly after the 1980s, the world economy has been characterized by substantial shifts in manufacturing activities nature, and the product demands are being met by an integrated world economy. The internationalization of capital that increased since the beginning of this century with multinational and transnational enterprises, resulted in the world globalization of economic activities since the 1980s. To this integration, the contribution of services in the field of transportation and communications facilitated the configurations of production facilities in multinational enterprises. But those configurations are sustained through sophisticated construction and design services and also by the international financial services. These services insure linkages in the channels of production and distribution, performing the role of a flux in the international economy. In this way, sophisticated service groups are replacing traditional manufacturing activities as leading sectors in advanced economies, and possible in the growing ones.

As already seen, many transnational service corporations in both developed and developing countries decide their foreign direct investment according to the possibilities of better response to the demands. A UN study directed by Sauvart (1993) has investigated empirically the determinants of these foreign direct investments. The conclusions of the study showed that

when firms in services industries invest abroad, their motivations are similar to those investors in manufacturing industries, that is, those firms like to operate in large markets, populated by cultures not too different from their own, with a minimum amount of government restriction, to supply pre-established client firms from their own country. Firms in oligopolistic industries tend to be particularly active because entry barriers limit the scope for easy entry by marginally profitable firms. But even if services firms are location-bound, technology is beginning to change this attribute.

Thus, service exports as well as imports are an important part of the process of internationalization as global markets have become more important to economic relations. Many cities, as much in developed countries as in developing ones, were confronted in the 1970s with disparities in growth and periodic breakdowns in land, labor and housing market, and in other economic trends. As the internationalization process called for some transformations in the economic infrastructure mainly through services activities, these regions could show a recovery in the decreasing economic development, and a increase in employment opportunities, although jobs for unskilled have progressively evaporated and the demand for skilled professional labor has risen significantly (Warf 1991:261).

The internationalization of the world economy in the 1980s has reinforced the position of many developed cities in the global financial hierarchy. The case of New York metropolitan region, is a good example of the effects of internationalization of services. This city, throughout much of the mid-1970s demonstrated symptoms of urban decay: dropping *per capita* income, declining tax revenues, high unemployment worsened by a mass evacuation of manufacturing firms, a exodus of corporate headquarters, a collapse of the real estate markets and consternation in the business community (Warf 1991:245). In the 1980s, however, New York has experienced a remarkable resurgence to become one of the healthiest part of the United States, and the above mentioned economic indicators showed again a considerable good situation. The reasons for this change lie largely on the region's growing international orientation, as part of the tripartite axis that dominates the global geography of finance, together with London and Tokyo. Much of this trend was due to the internationalization of service economy, although it is erroneous to attribute the region's recovery entirely to the service sector. New York city has more manufacturing jobs than many other industrial cities, but it was the financial and business services particularly the most internationalized ones, which have been primarily responsible for the region's recovery.

The deregulation of financial services and the advent of advanced communications has led to the internationalization of financial services firms. The globalization of the world's economy has created a new role for the cities that are international hubs of business and those linked together by telecommunication technology. Originally, international banking developed as a complement to international trade, because it is an imperative for a financial institution to have

the presence physically close to the client and an active presence in important markets in order to do business effectively, enhanced by the importance of reliable direct connections. Only recently international banking and international trade are separate as two parts of a world network rather than one (Warf 1991). Today financial markets operate on a twenty-four hour basis aided by the electronic transfer of informations and funds around the world.

Electronic financial services make it possible to disperse the financial services industries, although this activities are subject to both centrifugal and centripetal forces. Some aspects of the financial services industry benefit from centralization because of the economies of scale in information gathering and processing. Nevertheless, others aspects benefit from decentralization, as for instance, when costly information about local borrowers, small firms and local market conditions points to the need for face-to-face contact and decentralized operations, or when national and international time zone differences impose another diseconomy of centralization.

In a general way, services play an increasingly important role in economic relations among nations, in addition to playing a major role in national economies at all levels of economic development (particularly in modern economies). Services account for a growing share of international trade as we can see from Table 7 that illustrates the evolution of global market for goods and services since the 1970s and the position of main economies of the world in this respect. Those informations were collected by the United Nations that classified the groups of countries as follows. Developed countries: America including Canada and United States; Asia including Israel and Japan, Europe including Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom; South Africa; Oceania including Australia and New Zealand. Developing Countries: America including Mexico and all South and Central America countries; Africa including all countries except South Africa; Asia including all countries except Israel and Japan; Europe including Malta, Yugoslavia (former), Albania, Bulgaria, Czechoslovakia (former), Hungary, Poland and Romania; Oceania including Fiji, Kirribati, Papua New Guinea, Samoa, Solomon Islands, Tonga and Vanuatu.

It has to be stressed that there is some problems in measuring the role of services in international trade, due to the fact that not only services add value to international trade but they need not be exchanged across borders to be actually traded. As explained by Nusbaumer (1987:33), traditionally trade implies a change of ownership between the supplier resident in one nation and the buyer or consumer resident in another and economists have usually assumed that goods are the normal object of exchange between different countries. Since services are sharing a greater part in international trade, in order to deal with exchanges in services or international transactions of services, the definition of "trade" has been adapted to the realities of exchanges of invisible or immaterial products and of transfer of knowledge between economic units and

countries. Such transfers of knowledge are intangible in character, but may be done over long distances, with the simultaneous presence of the transferer and the transferee, depending on the mode of transmission used.

Nevertheless, even if the data on imports and exports of goods and services cannot reveal the above characteristics of service trade and cannot be adjusted for size of population, income *per capita* and technological achievement, it is possible to make some findings from the available informations. First, the degree of interdependence of major trading economies has increase rapidly from the 1970s to 1993, for both goods and services; and in the case of services the trend was also well marked. Second, the disparity between the degree of interdependence of major economies and economies at a lower level of development is large and increasing.

Thus, in the international economy, service activities are located in the context of the growth of global economic interdependence or dependence. Although developing countries show a greater level of dependency from developed countries, modern economies also show a degree of dependency of foreign supplies and on foreign markets, as shown by the amount of imports. This

Table 7
Exports and Imports of goods and services

Economies	Goods		Services	
	Exports	Imports	Exports	Imports
Developed				
1970	221	214	88	84
1980	1255	1327	555	520
1993	2544	2449	1561	1562
America				
1970	59	54	27	26
1980	292	309	131	104
1993	601	726	323	294
Asia				
1970	20	17	5	6
1980	133	134	35	47
1993	366	230	211	217
Europe				
1970	133	134	54	46
1980	778	841	379	348
1993	1501	1419	1003	1009
South Africa				
1970	3	4	1	2
1980	26	18	4	8
1993	24	18	4	9
Oceania				
1970	6	5	1	3
1980	27	25	6	13
1993	53	51	19	32
Developing				
1970	55	54	14	26
1980	555	443	120	209
1993	976	1006	279	364

America				
1970	16	16	5	9
1980	105	110	35	64
1993	141	161	56	92
Africa				
1970	13	11	2	6
1980	96	76	15	37
1993	67	75	26	44
Asia				
1970	23	23	5	10
1980	343	240	64	101
1993	748	753	191	221
Europe				
1970	2	3	1	1
1980	10	15	5	7
1993	17	15	5	5
Oceania				
1970	0.2	0.4	0.1	0.1
1980	1	2	0.4	1
1993	3	2	1	2

Source: *UN Handbook of International Trade and Development Statistics*, UN, 1995.

interdependence or dependence is represented by all forms of economic interchange taking place through buying and selling of goods and services across borders and through direct production by individuals or enterprises of one nation on the territory of another nation. Various factors affect the significance of this (inter)dependence for different countries, depending on the size of their market, of their population (consumers), their *per capita* income and the level of technological achievement of each economy.

But the interdependence in what concerns to services, is not well measured only by data for international trade, because services are an integral part of the goods-production process as to economic integration, as already seen. Therefore, the change in the service content of goods over time should also be taken into account to measure the contribution of services to global interdependence. Unfortunately, those informations are not yet disponible in general statistics.

However, as we can see from Table 8 in 1993, the share of services as percent of goods in international trade, both to exports and for imports is above 30% for developed countries and above 26% for developing ones, showing a trend to rise, as we can observe from the significant annual growth rates since 1980. It is interesting to note that although it is a expected trend for developing countries to import services in a greater amount than to export them, for most of the developed economies, except in America, the share of imports of services is also higher than of exports, confirming the interdependence of global markets.

The composition of the service trade, however, between developed and developing countries, but also among the countries inside each group and region, revealing the specialization of each economy. For instance, European countries are much more specialized in tourism that

other nations, as we can see from the share of Travel in the distribution of exports. This kind of service shows the second highest growing annual rates in trade for all countries. The highest rate is found for "Others" services, that include mainly technical assistance and consultancy to new production processes, information, telecommunication and other computer services, that is the above mentioned knowledge transference. Those services represent an important share of service exports mainly in American and Asian developed countries, where producers and distributors of services have at their disposal a greater amount of modern means of information and knowledge, but are also considerable in other developing countries, except in Europe because of the economic and political situation those countries are passing through.

Besides the expansion of service activities internationally mostly due to innovations in the field of telematics or telecommunication technologies, since the 1960s it has been noticed the considerable growth in foreign direct investments by services companies of developed countries. From this period to the 1980s, e.g., outward flows of foreign direct investment in services of United States, United Kingdom, Germany and Japan have tripled (Nusbaumer 1987:164). It is possible to say that foreign direct investment is complementary in trade in services. In some sectors as banking and insurance, for instance, the international communication through telematics permits closer interlinkages between branches and subsidiaries of companies operating in different markets, and also between financial and insurance companies worldwide and their multinational enterprises in the goods-producing sector. These financial and insurance institutions need to expand their activities in new domains and regions, establishing a presence in distant markets, and each subsidiary acts as a relay in a global network of information flows and business connections.

Table 8
Trade in Services - Exports and Imports
1993

(%)

	Services as % of goods	Distribution of service trade 1993				Annual growth rates 1980-93			
Economies		Insur.	Transp.	Travel	Others	Insur.	Transp.	Travel	Others
EXPORTS									
Developed	30.3	3.0	4.1	81.9	11.0	3.8	5.2	8.7	9.6
America	30.9	5.0	19.9	39.4	35.7	3.9	8.9	12.8	17.4
Asia	16.5	20.4	20.9	10.4	48.3	2.5	4.9	10.5	12.8
Europe	33.7	0.4	0.4	97.6	1.5	4.0	33.0	7.1	8.1

South Africa	15.0	11.9	32.8	46.6	8.7	1.7	0.0	6.3	- 0.5
Oceania	31.5	7.6	29.7	41.8	20.8	33.8	5.7	12.5	10.3
Developing	26.2	10.8	16.2	36.7	36.2	8.4	4.5	8.6	9.5
America	34.4	7.0	16.4	45.6	31.0	4.3	3.0	6.9	7.8
Africa	39.3	6.2	29.6	34.2	29.9	-3.0	4.2	6.5	8.5
Asia	22.2	12.8	13.2	33.9	40.1	13.2	5.6	11.2	11.1
Europe	32.5	4.5	82.1	9.8	3.6	4.8	2.9	-0.8	-6.2
Oceania	34.3	4.9	19.7	35.4	39.9	13.7	6.4	5.9	20.5
IMPORTS									
Developed	31.8	13.2	17.0	31.9	37.9	4.6	5.2	8.8	10.3
America	20.4	10.5	17.6	39.8	32.1	4.9	7.4	10.7	15.5
Asia	46.9	10.5	24.5	29.6	35.4	6.7	4.2	14.3	10.8
Europe	35.1	14.3	14.8	30.0	40.9	4.4	4.9	7.5	9.4
South Africa	30.5	25.9	21.1	38.8	14.2	0.8	1.6	7.2	-1.3
Oceania	35.2	20.5	25.0	30.3	24.2	2.3	5.8	5.9	8.9
Developing	27.2	28.7	13.6	24.4	33.3	3.9	4.7	6.5	6.3
America	30.3	23.0	18.7	35.9	22.3	3.9	11.5	4.0	4.2
Africa	35.6	45.5	16.4	25.3	12.8	-1.1	0.7	1.8	0.8
Asia	25.9	30.2	12.0	22.7	35.1	5.6	9.0	9.3	9.4
Europe	33.8	20.3	18.0	8.4	53.3	2.7	2.9	9.7	1.1
Oceania	62.0	25.0	4.3	10.8	60.0	2.1	-2.0	10.3	17.2

Source: *UN Handbook of International Trade and Development Statistics*, United Nations, 1995.

Economic restructuring and regional effects

Besides the above aspects of the relations among the economic restructuring process and the increase of service activities, some recent researches examine the regional effects of this restructuring (Daniels, 1991). As stressed before, since the 1960s, it was observed the increase of networks designed by transnational corporations to articulate the internationalization of production and services, which gave prominence to "world cities". At this time it was observed a restructuring of the world urban hierarchy.

Concerning to these "world cities", the Nomura Research Institute (Rimmer (1991) undertook in 1982 a survey of the form and strength of the integration of urban centers into the world capitalist system. This research reviewed 345 cities in terms of 20 attributes reflecting personal services, commodity and commercial transactions, information flows, and international finance. 178 cities (including Shanghai, Fukuoka, Dacca, Venice and Bordeaux) were eliminated from the survey because they failed to reach the minimum threshold for recognition as "international cities". From the remaining, there were classified three levels of international cities. Eighty cities were classified as third-ranking on account of their particular importance in commodity and commercial transactions (for example, Akron, Baghdad, Birmingham, Nagoya and Stuttgart. Fifty-seven were classified among second-ranking international cities, according reflecting besides these functions, their additional pull in personal services (Bombay, Osaka,

Rotterdam and Taipei, for instance). In the first-ranking group, was new York, London, Paris, Singapore, Sydney, Melbourne and Tokyo. This type of 'superclass' cities, that emerged facilitated by global electronics networks which are allowing information to be centralized. Twenty-five others also could be classified in the first-ranking according to their greater strength in information flows and financial transaction. The three levels of international cities were most heavily concentrated in North America, Western Europe and to a lesser extent, in East Asia. Their presence were sparse in Africa, Central and South America and in other parts of Asia.

From the inside point of view of the regions of a nation, there have been considerable evidence suggesting spatial transformations. The system of central places indicated by Christaller in 1937 (Haddad 1989) that described an urban size hierarchy according with some functions provided for each city, was derived from a regional context, that is historical market places in southern Germany. The development of manufacturing industries stressed the concentration of activities in central places. Nevertheless the updated versions of this model reflect processes and patterns on a global scale, where the concentration of producer services in large agglomerations are regarded as contributing to a new world-wide system of central places (Jaeger and Durrenberger 1991), and at the top of it is found the "world cities" of New York, London and Tokyo.

But the new urban size hierarchy does not necessarily coincide with the same relevant functions. Jaeger exemplifies with the case of Switzerland, where Zurich ranks on top due to the financial services industry, Basle for its strong and internationally oriented manufacturing industry of chemicals, and Berne because it is the capital and concentrates most of the national bureaucracy. In this way, a city can be a central place on one dimension, but peripheral on another. The same characteristic is found in other nations of Europe.

In the core of those transformations is the growing importance of services in general and their spatial dynamics in particular, and the related development of services to manufacturing. However different kinds of transformations are observed in different countries. In some countries (for instance England) it was found a strong relationship between industrialization and urbanization after the post-war period. The first impact was a period of simultaneous industrialization and urbanization, followed by the decline in industrial activities in the 1960s, associated with a process of population de-concentration. On the other side some other countries (Italy for instance) there was no obvious relationship between industrialization and urbanization. In one part of the country the process of population concentration slowed down while industrialization came to an end, but in other areas a relatively slow process of population concentration took place together with sustained industrial development and no spatial hierarchy was reformed at a national scale.

The decentralization of manufacturing was an international phenomenon in the 1960s and 1970s, and the world recession cut investment opportunities and diverted huge sums of money from the manufacturing sector to the financial services. The general decentralization of production is attributable to a concentration of producer services that increased with these enormous funds. But some authors stressed that the downfall of urban industries in some developed countries was caused to a substantial degree by the combination of land-shortages and unrest of industrial labor which resulted in the rise of wage costs faster than productivity growth. This fact is considered one of the major reasons for the subsequent decentralization of production, since this decentralization was achieved specially by subcontracting particular stages of production to small firms without strong unions and in a relatively weak economic position or by establishing branch plants (Jaeger and Durrenberger (1991).

In many countries, this decentralization was characterized by a spatial separation between head offices and branch plants, with an internal reorganization of functions which promoted a spatial division of labor. Many times this new industrial structure is compound by small and medium-size firms. Three models of small firms are distinguished (Brusco 1982 apud Jaeger and Durrenberger 1991): the "traditional artisan", represented by a skilled craftsman supplying the local market, the "dependent sub-contractor", a small firm selling mainly to a single large enterprise and the third one is a "small firm in the industrial district". The market of these firms is national or international, the production is vertically disintegrated in highly competitive units, and there is no domination by a single, large firm. Subcontractors most time are independent because they supply several firms simultaneously. Machinery is rather sophisticated and in part requires high skilled workers, but there are also some simple tasks to be performed. In those small firms, marketing, research and development activities are purchased from external firms, located in the towns where the contacts to local firms are guaranteed and the benefits of agglomeration economies are skimmed off. Thus, it is observed a centralization of producer services in areas with vertically disintegrated production structure.

Service dynamics is also strongly related to counterurbanization. This process is explained by some authors as a fundamental reversal of the secular urbanization trend that began in the mid-1970s (Jaeger and Durrenberger 1991) when peripheral and small communities of some countries began to exhibit increases in net-migration, and it was observed a turnaround of the classic rural-urban migration pattern.

This new process had a great difference from the suburbanization process what is explained by the following model of agglomeration process described by Jaeger and Durrenberger. The first phase of agglomeration is the urbanization, when the agglomeration gains population from rural areas, and this growth is high in cities. The second phase is the suburbanization, when the agglomeration as a whole is still growing, attracting migrants from the

rural periphery but population gains in the cities declines or reverses, and the fast-growing zones are the suburbs in the fringe of the agglomeration. Finally the third phase is the counterurbanization, when the population in the agglomeration is declining whereas rural areas may increase in inhabitants, and the peripheral rural places remote from the agglomerations attract urban migrants. This pattern of disurbanization may be generated by an ongoing tendency of the agglomeration expand, that is, a periurbanization. A fourth phase can be observed, which concerns reurbanization processes, when there are still population losses in the agglomeration while population in the city is stabilized.

In developed countries recent studies have shown a decline in the pace of counterurbanization, but it is also shown that the effects of counterurbanization has reshaped the built environment and its effects are lasting. In what concerns to the service activities, it is observed that the location of consumer services tends to follow the population distribution, but the role of producer services is less clear-cut. Generally producer services are expected to concentrate in big agglomerations, but some recent studies indicate that this trend has slowed down or it is not the same among different developed countries (Jaeger and Durrenberger 1991:118). Generally, metropolitan areas show stronger rates of industrial decline but weaker rates of service growth than non-metropolitan areas. But producer services show the fastest growth in metropolitan as well as in intermediate and peripheral areas, and they are followed by consumer and financial services while construction and manufacturing are in decline. Those financial services include both producer and consumer services.

Under such conditions no simple central-place structure captures the complexity of services and metropolitan development, and it is frequently observed not a single center but many different cities where the process of reurbanization is taking place. Thus, development is moving from totally urbanized and industrialized areas towards a mixed environment where the manufacturing firm becomes rural but continues to receive support from urban centers. The producer services concentrate in relatively small or medium-sized towns and cities in regions mostly favored by the effects of counterurbanization. In some developed countries of Europe, for instance, these towns play no major international role, but are very important in a regional context as suppliers of producer services and sustain relatively high levels of international exports both in consumer (tourism) and in manufacturing.

Besides the fact that many authors describe the spatial dynamics of contemporary service industries along the lines of a global central-place system, it is observed that the growth, internationalization and diversification of advanced services mainly producer services, promote an uneven spatial division of labour. Highly internationalized service activities may concentrate in a few world cities that dominate international markets, whereas the rest of the cities will serve domestic or local-markets.

However Jaeger and Durrenberger found evidences that some tendencies in developed countries may characterize a situation which differs from the global central-place model, and characterizes a multiple hierarchy. In this kind of model, shown in Figure 1, there is a whole set of variables distributed hierarchically in a coherent way, but the kind of hierarchy is not only central-related. It is possible to city A to rank higher than city B with regard to variable y and with regard to variable z . Then it will be characterized a coherent hierarchy and city A is more central in an absolute sense than city B.

However it is possible to find cases of multiple hierarchies, when city A may rank either higher than city B with regard to variable x , while the ranking is reversed with regard to variable z . Thus it is found two central-places interfering with each other. There is an interaction in a network with central places as nodes, from a peripheral to a central-place, with a new type of relationship of interdependency between places which are central with regard to different dimensions.

Figure 1 - CENTRAL PLACES

Coherent hierarchies Multiple hierarchies
Source: Jager and Durrenberger, 1991.

Those authors outline three processes which may have major influence on the development of multiple hierarchies. Flexible specialization and the decoupling of services from manufacturing are related, and professionalization (higher skills crucial for flexible specialization) allows for management strategies which cut across the divisions between services

and manufacturing. On the other hand, flexible specialization may involve externalization of services by manufacturing firms and this in turn may deepen the separation between such firms and services industries. Finally the counterurbanization formerly described, gives also rise to multiple hierarchies.

A research taking in account the new classification of economic activities proposed by Bailly and Maillat (1991) as we have previously mentioned, found some interesting results in what refers to regional structuring of activities. The research was based on aggregated employment data in individual establishment of a firm into the four functions: manufacturing, circulation, distribution and regulation. It was tested for four case studies involving both the national and the metropolitan regional scales, for which constitute the basic elements of modern production systems in Canada, Denmark, France and Switzerland. The study analyzed and identified the roles played by metropolitan regions in these countries, and contrast them with those played by peripheral regions, in order to understand regional specialization resulting from space restructuring of national production systems. Different patterns illustrate the changes in the production systems of these countries and their specializations.

In some regions, in the analyzed period (1971-85) manufacturing's share of employment fell, but still represented a great part of total employment (around 35% to 45%). Circulation activities increased in all the countries, in different degrees, according with the specific changes in the production systems of these countries and their specialization (more than 20% of total employment). In this area in particular, information flows has widespread and reflects a shift to economic systems designed to respond to increased information and communication requirements of the changes in productive processes. In particular, non-information-trained manpower was replaced in all activities by information-trained manpower as a result of a growing demand for activities relating to organization, co-ordination, supervision and access to technology and markets.

As to the distribution activities (around 29% to 35% of total employment), it was also observed a rapidly growing rate in Denmark and France, and a slower in Canada and Switzerland. The differences were explained because the individual distribution (retail trade, repairs, personal services) already accounted for a high percent of jobs in those last countries. The distribution role pattern reflects options chosen with regard to health and education, that is, public services which exhibit a growing need for investment in human capital.

The regulation activities confirm the trend in that period towards increased intervention in economic system, which is has severely changed presently. This functions was represented by more than 9% of total employment in France, Canada and Denmark in the beginning of the

1980s, and 4.4% in France, and only Denmark has showed a significant growth rate (4.2%) in the 1970s.

The results of this research, showed typical situations of developed countries, and has to be tested for developing ones. Three types of models were described for the composition of regional and national productive systems as a result of productive restructuring: a) the industrial model, where manufacturing accounts for over 50% of total employment; b) the consumer society model, where employment in distribution reaches 50%; c) the information society model, where circulation represents over 40% of total employment.

The authors conclude that we cannot assess that production systems are evolving towards a post-industrial system, because although circulation, distribution and regulation roles have increased considerably, the manufacturing role remains important in old industrial regions. Thus, the shift is not towards a service society as traditionally defined, but rather toward a post-manufacturing society in these regions, while metropolitan and touristic regions are evolving towards an information and consumption society.

Conclusion

This paper has dealt with the role of services in economic restructuring and development in modern and developing countries. The focus of attention has therefore been on those factors affecting the expansion of service activities.

Some attention has been devoted to describing the definitions and classifications of service activities found in present economic literature, in order to stress the need of understand the dynamics of service sector development through a perspective of the changing nature of those activities and of the relationship with industrial activities.

After this initial analysis of the multiple possible definitions and classifications of service activities, emphasis has been placed on the role of these activities to economic development and to productive restructuring of developed and developing economies. It was stressed the crucial role of the tertiary sector in the process of economic development, and the historical trends in

production, employment and productivity have been discussed and related to a number of theories.

It was seen the important role of the service sector in developed economies where it has become the most important source of employment, and that in many developing countries it has been observe the same trend. On the other hand, the role of services is more than that, it is a prerequisite for development rather than just a final product. Thus, their adequate provision then becomes a crucial element in the dynamics of development process of the economies. In this sense, the role of government services is fundamental in some less developed countries, through the provision of public services or complementing private provision of market services, in order to provide a network of infrastructure, health and educational services which can prepare the economy to the path to economic development.

The restructuring of productive composition of economies of different level of development was associated to the speed and degree of technological innovation in organizational and production processes, mainly related to the service sector, that is, in the fields of telematics and other telecommunication processes, computer services, related to information and knowledge transference. Besides this, the relevance of services in international trade was observed through the experience of modern and less-advanced economies, and the impact in local and regional development of those economies. These regional transformations recently led to a different theoretical model of economic influence based in distinct central places or distinct growth poles in the same region, instead of the former central place theory.

REFERENCES

AKEHURST, Gary and GADREY, Jean (Editors)m *The Economics of Services*, Frank Cass and Co. Ltd., London, 1987.

BAILY, A.S. and MAILLAT, D., *Le Secteur Tertiaire en question:activités de service, developpement economique et spatial*, Éditions Regionales Europeenes, Geneva, 1986.

BAILY, Antoine and MAILLAT, Denis, " Service activities and regional metropolitan development: a comparative study" , Daniel P.W. (ed.) *Services and Metropolitan Development*, Routledge, New York, 1991.

BANNON, M.J., " The Tertiary Sector and National Development: The Case of Ireland", Ferre & d'Entremont, A. (ed.) *The Changing Geography of Urban Places*, University of Navarra, 1987.

BARRAS, R., "New Technologies and the new services", *Futures*, N.18, 1986.

BAUMOL, William J., "Macroeconomics of Unbalanced Growth", *American Economic Review*, N. 57, 1967.

BAUMOL, William J., " Information Technology and Service Sector: A Feedback Process?", in *Services in Transition. The Impact of Information Technology on the Service Sector*, Fauhaber, G. (ed.), Ballinger Pub. Co., Cambridge, Mass., 1986.

BAUMOL, William J., *Productivity Policy and the Service Sector*, Discussion Paper 1, Fishman-Davidson Center for the Study of the Service Sector, Washington DC, 1987.

BECKER, Gary, " Investment in Human Being", *Journal of Political Economy*, October 1962.

BRAVERMAN, H., *Labor and Monopoly Capital*, Monthly Review Press, New York, 1974.

CACCIAMALLI, Maria Cristina, *Setor Informal Urbano e Formas de Participação na Produção*, Série Ensaio Econômicos n. 26, IPE/USP, São Paulo, 1983.

CASTELLS, M., *The Informational city: Information Technology, Economic Restructuring and the Urban-Regional Process*, Blackwell, Oxford, NY, 1989.

CLARK, C.A., *The Conditions of Economic Progress*, Macmillan, London, 1940.

CHULLY, Juan Bautista Nunura, *Ajustamento e Informalidade no Mercado de Trabalho Peruano: 1950-1989*, FEA/USP, Tese de doutorado, São Paulo, 1992.

DANIELS, P.W., *Service Industries in the World Economy*, Backwell Pub., Oxford, UK, 1993.

DANIELS, P.W., *Services and Metropolitan Development*, Routledge, London, 1991.

FISHER, A.G., *The Clash of Progress and Serenity*, London, 1935.

FISHER, A.G., "Production, Primary, Secondary and Tertiary", *Economic Record*, n. 15, June/1939.

FUCHS, Victor R., *The Service Economy*, National bureau of Economic Research, NY, 1968.

GERSHUNY, Jonathan I. and MILES, I.D., *The New Service Economy. The Transformation of Employment in Industrial Societies*, Frances Pinter Publishers, London, 1983.

GIERSCH, Herbert (editor), *Services in World Economic Growth* . Westview Press, Colorado, 1989.

- HEPWORTH, M., *Geography of Information Economy*, Belhaven Press, London, 1989.
- HILL, T.P., "On goods and services" , *Review of Income and Wealth*, N. 23, 1977.
- HOYT, Homer and others, *The Techniques of urban Economic Analysis*, Ralph W. Pfouts (ed.), West Trenton, New Jersey, 1960.
- ILO, *Yearbook of Labour Statistics. Restropective Edition on Population Censuses, 1945-1989*, ILO Bureau of Statistics, Geneve, 1990.
- ILO, *Yearbook of Labour Statistics*, ILO Bureau of Statistics, Geneve, 1994.
- INMAN, Robert P. (ed.) *Managing the Service Economy. Prospects and Problems*, Cambridge University Press, N.Y., 1985.
- JAEGER, Carlo and DURRENBERGER, Gregor, "Services and counterurbanization: the case of central Europe", Daniels, P. W. (ed.), *Services and Metropolitan development*, Routledge, London, 1991.
- KON, Anita, *O Problema Ocupacional: Implicações Regionais e Urbanas*, Perspectiva, São Paulo, 1979.
- KON, Anita, *A Produção Terciária*, Nobel, São Paulo, 1992.
- KON, Anita, *Economia Industrial*, Nobel, São Paulo, 1994.
- KON, Anita, *A Estruturação Ocupacional Brasileira: uma Abordagem Regional*, SESI, Brasília, 1995.
- KON, Anita, "Tecnologia e Trabalho no Cenário da Globalização", *Globalização...*, PUC/SP, São Paulo, 1996.
- KON, Anita, *Subsídios Teóricos ao Planejamento Publico Econômico*, NPP-EAESP/FGV, Relatório Técnico de Pesquisa, São Paulo, 1996.
- MARSHALL, J. Neill, *Services and Uneven Development*, Oxford University Press, New York, 1988.
- MARSHALL, J. Neil & WOOD, Peter A., *Services and Space: Key Aspects of Urban and Regional Development*. Longman Group Limited, Harlow, England, 1995.
- MASSEY, D. *Spatial Division of Labor*, Macmillan, London, 1984.
- MASSEY, D. and MEEGAN, R., *The Anatomy of Job Loss*. Methuem, Andover, 1982.
- MILES, I., "Services in the new industrial economy", *futures*, July/august, 1993.
- MINCER, Harold, "Investiment in human Being", *Journal of Political Economy*, October, 1962.

McKEE, David L., *Growth, Development and the Service Economy in the Third World.*, Praeger,, New York, 1988.

MORAES, Fábio Cassio, *Impactos Econômicos da Tecnologia da Informação*, PUC/SP, Dissertação de Mestrado, São Paulo, 1996.

NORMANN, Richard, *Service Management: Strategy and Leadership in Service Business*, John Wiley & Sons, Chichester, England 1991.

NOYELLE, T.J. and STANBACK, T.M., *The Economic Transformation of American Cities*, Rowman and Allanheld, Osman, New Jersey, 1984.

NOYELLE. T.J., *The International Services Economy*, paper presented at Localities in An International Economy Workshop, University of Wales, Institute of Science and Technology, Cardiff, 1986.

NOYELLE, T.J. and STANBACK, T.M., *The Post-War Growth of Services in Developed Economies*, Report to United Nations Commission on Trade and Development, Geneva, 1988.

NUSBAUMER, Jacques, *The Service Economy: Lever to Growth*, Kluwer Academic Publishers, Boston, 1987.

NUSBAUMER, Jacques, *Services in the Global Market*, Kluwer Academic Publishers, Boston, 1987.

OCHEL, W. and WEGNER, M., *Services Economy in Europe. Opportunities to Growth*, Pinter, London, 1987.

OECD, " The Contribution of Services to Employment", *Employment Outlook*, Sep/1984.

PERROUX, Francois, " Note on the Concept of Growth Poles", David L. McKee, Robert D. Dean and William H. Leahy, eds. *Regional Economics: Theory and Practice*, Free Press, NY, 1970.

PINCH, S.P., "The restructuring thesis and the study of public services" , *Environment and Planning*, A N. 21, 1989.

PORAT, M., *The Information Economy: definition and measurement*, Department of Commerce, Washington, 1977.

RIDDLE, Dorothy I., *Service-Led Growth. The Role of the Service Sector in World Development*, Praeger Publishers, N.Y., 1986.

RIMMER, Peter J., " The global intelligence corps and world cities: engineering consultancies on the move", Daniels (ed.) *Service and Metropolitan Development*, Routledge, London, 1991.

SAUVANT, Karl P., *The Transnationalization of Service Industries*, United Nation, Transnational Corporations and Management Division, NY, 1993.

SAYER, A. and WALKER, R., *The New Social Economy: Reworking the division of Labour*, Oxford, London, 1992.

SINGELMAN, J., *From Agricultural to Services: The Transformation of Industrial Employment*, Sage, Beverly Hills, CA, 1978.

STIGLER, G.J., *Trend in Employment in Services Industries* National Bureau of Economic Research, Princeton University Press, NY, 1956.

THUROW, Lester, *Toward a High-Wage, High-Productivity Service Sector*, Economic Policy Institute, Washington, 1989.

UN, *The Transnationalization of Services Industries*. United Nations, New York, 1993.

UN, *Handbook of International Trade and Development Statistics*, UN, New York, 1994.

WALDSTEIN, Louise, *Service Sector Wages, Productivity and Job Creation in the US and Other Countries*, Economic Policy Institute, Washington, 1989.

WALKER, R. "Is there a service economy?", *Science and Society*, N. 49, 1985.

WARF, Barney, "The Internationalization of New York Services", Daniels, P.W. (ed.) *Services and Metropolitan Development*, Routledge, London, 1991.

WORLD BANK, *World Development Report 1996*, Oxford University Press, New York, 1996.

ZWEIFEL, Peter, *Services in Switzerland*, Springer-Verlag, Berlin, 1993.